S. HRG. 98-361 PT. 3

DEPARTMENT OF DEFENSE APPROPRIATIONS FOR FISCAL YEAR 1984

HEARINGS

BEFORE A

SUBCOMMITTEE OF THE

COMMITTEE ON APPROPRIATIONS

UNITED STATES SENATE

NINETY-EIGHTH CONGRESS

FIRST SESSION

H.R. 4185/S. 2039

Part 3—(Pages 1-454)

Congressional Budget Office
Department of Defense
Department of the Army
Department of the Navy

Printed for the use of the Committee on Appropriations

16-521 O

U.S. GOVERNMENT PRINTING OFFICE
WASHINGTON : 1984

5181-25

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DEPARTMENT OF DEFENSE APPROPRIATIONS FOR FISCAL YEAR 1984

WEDNESDAY, JUNE 15, 1983

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, D.C.

The subcommittee met at 10:05 a.m., in room SD-138, Dirksen Senate Office Building, Hon. Ted Stevens (chairman) presiding.

Present: Senators Stevens, Rudman, and Stennis.

DEPARTMENT OF DEFENSE

DEPARTMENT OF THE NAVY

SHIPBUILDING AND LOGISTICS

STATEMENT OF EVERETT PYATT, PRINCIPAL DEPUTY ASSISTANT SECRETARY OF THE NAVY (SHIPBUILDING AND LOGISTICS)

NAVY SHIPBUILDING AND OVERHAULS

BUDGET REQUEST

Senator STEVENS. The subcommittee will come to order.

Good morning. We are here to conduct a review of the Navy's request for ship overhaul and modernization programs and the shipbuilding effort for fiscal year 1984.

Between these two major initiatives, the Navy is requesting over $18 billion for shipyard industrial work, more than 20 percent of the budget authority requested for all Navy activities in this fiscal year. This request is roughly $5 billion below the fiscal year 1983 program, but this comparison is skewed by the fact that two carriers were funded last year and none is requested in this year's program.

Although the budget authority request is large, the fiscal year 1984 outlay impact of these programs is less than $4.3 billion—only $1 billion of this is from shipbuilding. Regardless, this program is yet another installment on the major commitment to the 600-ship Navy objective and all that it implies.

Mr. Secretary, we are happy to have you here, and Admiral Walters, Admiral Fowler, and Admiral Nunneley.

We will print your full statements in the record.

We do have a bill pending on the floor. As a matter of fact, one of the amendments vitally concerns your program. I am subject to be called at any time. That is where our colleagues are. I know there are many who would like to hear your overview.

We would appreciate it if you would proceed, Mr. Secretary.

Mr. PYATT. Thank you.

We will submit our statements for the record. I will briefly review where we stand.

SHIPBUILDING REVIEW

The 1984 program is built on a strong foundation that has been established over the last couple of years—the foundation that the Congress and the administration established in concert that moves this Nation closer to the goals that we have established.

As we look into the future we will need to be sure that the Navy programs and the merchant marine programs are balanced and that we maintain a sufficient industrial base. Last year only three new deep draft commercial vessels were ordered from U.S. shipbuilders.

Having obtained congressional approval of our earlier shipbuilding programs, we moved with dispatch to bring these plans to reality. In 1982 we awarded contracts for construction and conversion of all 32 ships authorized in the SCN account and in the sealift charter programs. This is the first time in a long time that we have been able to accomplish this in the same year.

Also in 1982, we took delivery of 25 ships, offsetting retirement of 14 older vessels, for a net gain of 11 ships. Of the 25 deliveries, 19 were on or ahead of schedule with 7 early deliveries against only 6 late deliveries. For 1983 our projections are better. We now anticipate 19 of 21 deliveries on or ahead of schedule including 8 early deliveries and only 2 late deliveries.

Of the approved 1983 program we have already awarded all of the ships except for the three CG's and the hospital ship. The CG's will be awarded on June 20 followed by T-AH soon thereafter. The CG contract and LSD contract are examples of using more fixed-price type contracts rather than the cost-plus type contracts we have used in the past.

We are also moving away from fairly loose share lines of 70/30 or 80/20 to 50/50 share lines like those used for Trident, SSN-688 class, T-AO, T-AKRX and the fiscal year 1983 CG's and LSD-41's. This provides a contractor with a good incentive to get the ships done and to avoid cost overruns, so that we can come to making our promises of cost controls to the Congress.

Over the past couple of years we have been able to have a stable program, one that the contractors have been able to plan on and the Navy has been able to plan on. We think this has been very influential in achieving these goals.

FIVE-YEAR CONSTRUCTION PROGRAM

In addition, the existence of stability has helped us to improve our competitive posture. As we look ahead we see that about 95 percent of the 5-year program will be let competitively, with only Trident, LHD, and any future nuclear carriers beyond the 5-year plan requiring noncompetitive awards. The results of strong competition have already been seen in the recent contract awards for the construction of frigates, oilers, sealift conversions, salvage ships, floating dry docks, and surface craft.

One very important point is that we have no shipbuilding claims. Many of you will recall that we had a long period of very divisive years that really prevented the shipbuilders from focusing on building ships. There are currently no claims relating to Navy ship construction, and none have been filed in more than 1 year. Both the Navy and the ship contractors have concentrated on bringing warships to the fleet on schedule and within budget rather than arguing about these contracts in court.

As I conclude my remarks today, I would like to thank this committee for its unstinting commitment to reestablishing our Nation's maritime strength. To you and your colleagues must go much of the credit for the progress we have made in articulating our vision of a sound and vital maritime America; we look forward to continuing our work and full cooperation with you as we jointly bring this vision to reality.

[The statement of Mr. Pyatt follows:]

PREPARED STATEMENT OF EVERETT PYATT

PRINCIPAL DEPUTY ASSISTANT SECRETARY OF THE NAVY

(SHIPBUILDING AND LOGISTICS)

Mr. Chairman and distinguished membes of the committee, I welcome this opportunity to discuss the Navy's Shipbuilding and Conversion budget request for fiscal year 1984. The Navy's program for fiscal year 1984 builds on the strong foundation and momentum that the Congress and this administration have established in concert, and moves our nation closer to realizing the goals that we have previously agreed represent the force levels required to support our national interests.

Not only does this shipbuilding program meet essential naval force level requirements, it also is a vital factor in preserving the shipbuilding industrial base, which today depends for its survival almost completely on the Naval Shipbuilding and Conversion Program. As commercial work in the industry continues to decline, it is all the more important that the naval shipbuilding program maintain its stability in order to preserve the nation's industrial base and maintain jobs in the industry for American workers. The importance of the Navy's program in this regard is best illustrated by the fact that in 1982 only three new deep draft commercial vessels were ordered from U.S. shipbuilders, nationwide.

Having obtained congressional approval of our earlier shipbuilding plans, we have moved with dispatch to bring these plans to reality. In 1982 we awarded contracts for construction and conversion of all 32 ships authorized in the SCN account and in the sealift charter programs. This is the first time in memory that all ships authorized in a given year have been brought under contract before the end of that calendar year. Also in 1982, we took delivery of 25 ships, offsetting the retirement of 14 older vessels, for a net gain of 11 ships. Of the 25 deliveries, 19 were on or ahead of schedule with 7 early deliveries against only 6 late deliveries. For 1983, our projections are even better. We now anticipate 19 of 21 deliveries on or ahead of schedule including 8 early deliveries, and only 2 late deliveries.

Of the approved fiscal year 1983 program we have already awarded all the ships except for the three CG's and the T-AH. The CG's will be awarded on 20 June, followed by the T-AH soon thereafter. The CG contract and the LSD contract are examples of using more fixed price type contracts, vice the cost plus type contracts of the past. Where cost plus award fee is still appropriate, we have tightened up on the award fee procedures. We are also moving away from the 70/30 or 80/20 share lines common in the past to more 50/50 share lines like those used for Trident, SSN-688 Class, TAO, TAKRX and the fiscal year 1983 CG's and fiscal year 1983 LSD-41's.

A cornerstone of our planned Naval construction program has been its inherent stability. Program stability allows both the Navy and our industrial base to plan effectively in accelerating ship construction, establishing enhanced competition, and making much needed investments in mordern shipbuilding facilities and technology.

Your support and approval of the Naval construction program over the past several years certainly can be credited for maintenance of that remarkably stable program.

With this stability we have made gains in increasing competition in shipbuilding. We now project that almost 95 percent of the 5-year program will be procured competitively, with only Trident, LHD, and any future nuclear carriers beyond the 5-year plan requiring non-competitive awards. The results of strong competition have already been seen in the recent contract awards for construction of frigates, oilers, sealift conversions, salvage ships, floating drydocks, and service craft.

Particularly gratifying, also, have been those favorable awards that have resulted from early participating by our shipbuilders and their design agents in the engineering process leading to the completion of contract design. As a Navy-industry partnership, we are exploring ways to bring ultimate producers into the process earlier, and we look to the T-AKX, T-AKRX, and T-AO, as current examples of what can be accomplished by earlier competitive producer involvement. Experience has shown that there is no reason why we should not continue to look to industry teams and coalitions of engineering agents, system suppliers, and shipbuilders to help us accelerate the design of naval ships so that we will have producible and affordable design in place when we are ready to produce the ships.

We have seen that small up-front investments in engineering competition among shipbuilders have saved millions of dollars on the construction contracts. We are continuing this competitive shipbuilder involvement on the fiscal year 1984 MSH and PBM programs and intend to expand this approach in our competitive shipbuilding programs in the future.

We now have at hand the opportunity to infuse a healthy measure of competition into our own shipbuilding industry, both for our immediate needs in the naval construction program and for the long term benefit of the U.S. shipbulding industry as a whole. Competition brings rewards no only in affordability, it also provides a key stimulus to creativity and conceptual innovation that can lead to improved performance as well.

And finally, I am pleased to report that unlike the very divisive years of the recent past, there are no shipbuilding claims outstanding relative to Navy ship construction or conversion and none have been filed in more than a year. Both the Navy and its ship contractors are concentrating on bringing warships to the fleet on schedule and within budget rather than arguing about these contracts in court.

As I conclude my remarks today, I would like to thank this committee for its unstinting commitment to reestablishing our Nation's maritime strength. To you and your colleagues must go much of the creidt for the progress we have made in articulating our vision of a sound and vital maritime America. We look forward to continuing our work and full cooperation with you as we jointly bring this vision to reality.

SURFACE WARFARE

STATEMENT OF VICE ADM. ROBERT L. WALTERS, U.S. NAVY, DEPUTY CHIEF OF NAVAL OPERATIONS (SURFACE WARFARE)

PREPARED STATEMENT

Senator STEVENS. Admiral Walters.

Admiral WALTERS. I have no statement, sir, other than to have my prepared statement in the record.

[The statement of Admiral Walters follows:]

PREPARED STATEMENT OF VICE ADM. ROBERT L. WALTERS, USN

DEPUTY CHIEF OF NAVAL OPERATIONS

SURFACE WARFARE

Mr. Chairman and distinguished members of the Committee, I am Vice Admiral Robert L. Walters, USN, the Deputy Chief of Naval Operations for Surface Warfare and the Appropriations Sponsor for Shipbuilding and Conversion, Navy (SCN).

Today, I am privileged to have the opportunity to present to you the Navy's Shipbuilding and Conversion budget request for fiscal year 1984 and to explain our requirements for this year as well as the remainder of the FY 1984-1988 five year shipbuilding plan.

During your deliberations last year, Congress gave full and unstinting support to the Administration's proposal to rebuild the U.S. Navy. With no critical adjustments to the President's request, you provided over sixteen billion dollars for Shipbuilding and Conversion, including the construction of two NIMITZ class nuclear powered aircraft carriers. This clear statement of national will was heard around the world. This was a clear signal that we as a nation intend to maintain a modern and powerful fleet as a part of our national strategy. We are fully aware of the difficult decisions you face in allocating our limited national resources and it is my intent to justify our shipbuilding and conversion requirements and provide the information you require in order to make the difficult decisions which lie ahead.

The Navy requires a balanced mix of ships and capability to provide adequate forces to permit a flexible response in conventional warfare and a secure nuclear deterrent force. We must retain sufficient naval forces to support the national strategy and to permit our national leadership a choice of responses over the full range of threats to our national security and treaty commitments. The Secretary of the Navy and the Chief of Naval Operations have provided in their testimony a clear statement of our overall requirements and the rationale which supports the FY 1984 budget request. Therefore, I will concentrate on those specific elements of our current and projected force mix which lead to the FY 1984 shipbuilding and conversion request and to the five year plan presented herein.

The Chief of Naval Operations has testified that "our highest priority is to deter nuclear war." The Navy is justifiably proud of its contribution to the Strategic Triad. We continue to devote considerable resources to maintaining and improving our undersea nuclear deterrent capability. Notwithstanding the high priority which must be assigned to strategic deterrence, we continue to believe strong conventional forces are an essential ingredient to the deterrence of conflict in general. Sea based airpower has long been a great and unique strength of the U.S. Navy, and we have made notable progress in both improving and increasing this capability by adding the necessary ships and aircraft to achieve a 15 Carrier Battle Group force by 1989. With the two CVN's appropriated last year, a continuation of the Carrier SLEP program, judicious service life extension of our older ships, and projected new construction, we can forecast a strong and highly capable Navy through the 1990's.

Our nuclear attack submarine force is another specific area of national strength. We continue to build and operate the best submarine force in the world even though we are significantly outnumbered by the Soviet Navy. Accordingly, we hope to increase our annual SSN construction rate to ensure we attain our minimum force level objective of 100 nuclear attack submarines. Our reliance on the strength and responsiveness of our Navy-Marine Corps amphibious force has again been demonstrated in our peacekeeping efforts in Lebanon. We have the best amphibious capability in the world today but, as our commitments continue at a high level, we must expand and modernize these forces.

Having addressed the major elements of our naval forces which support our missions of deterrence, power projection and sea control, it is necessary to address a number of essential ingredients which are less publicized but nevertheless vital to our overall balanced force structure. I now refer to a relatively large number of ships which comprise our surface combatant force, mobile logistic support force and mine countermeasures force. Naval planners are not so vain as to think we can be victorious in conflict without the full contribution of our sister services, nor do we think we can prevail with only our capital ship assets of CVN's, SSN's and amphibious ships. The offensive and defensive capability and the numerical strength of complementary surface combatants are applied to every naval warfare area. The distributed offfensive power residual in surface ships equipped with cruise missiles, long range surveillance afforded by surface ship AAW and ASW sensors, in depth firepower inherent in modern surf ace-to-air missiles and ASW weapons, naval guns to provide all weather around the clock support to forces ashore, and the diverse means of deploying these forces on any naval mission in any area of the world serve to round out the total strength of the U. S. Navy. Another distinct advantage that the U.S. Navy maintains over our potential adversaries is our ability to conduct sustained combat operations in distant places, far removed from base support structures. Our mobile logistic support forces which are composed of ships carrying fuel, ammunition, stores and repair facilities are also an essential ingredient of our total force concept. We have an urgent need to replace many overage ships and to modestly increase our force levels to keep pace with our naval strategy while providing some margin for attrition in conflict.

Finally, we must proceed to correct a long neglected aspect of naval warfare - mine countermeasures. Mine stockpiles coupled with known ability to deliver them represent a serious potential threat to the U.S. Our extensive coastline and numerous major port complexes must be afforded a degree of protection from enemy offensive mining. We have revitalized our mine countermeasures thinking and capability, and execution of the five year SCN plan is necessary to regain a minimal U.S. capability. Our program, in conjunction with the increased activity of several of our allies should regain an appropriate capability which will permit us to counter enemy mining efforts in vital areas.

I will now discuss in somewhat greater detail our justification for the shipbuilding program presented with the FY 1984 budget request.

Strategic Submarine Forces

The SSBN force today is composed of thirty-one LAFAYETTE and BENJAMIN FRANKLIN class ships plus the first two TRIDENT submarines, one of which began its deterrent patrols last year. A third TRIDENT submarine, FLORIDA (SSBN 728), has been delivered to the Navy and will commission on 18 June 1983. Ten SSBNs of the oldest classes previously in inventory have been either deactivated or have been converted to an attack submarine role. The TRIDENT submarine is a much more capable ship in every aspect than its predecessor and is equipped with 24 missile tubes vice 16. The first eight of the class will carry the highly capable TRIDENT I missile. Commencing with the ninth ship which was funded in FY 1981, TRIDENT submarines will be equipped with the even more potent D-5 missile, also known as TRIDENT II. Total SSBN force capability has been upgraded by the backfit of TRIDENT I missiles on 12 of the POSEIDON submarines.

The ultimate number of TRIDENT submarines to be constructed is still under consideration and depends on a series of interrelated decisions related to our total national requirements, continued compliance with SALT and any new START agreements. Our current plans are to build one TRIDENT submarine per year; however, it is feasible to build three TRIDENT submarines every two years without impacting planned SSN construction or opening a new nuclear submarine production facility.

The SSBN remains the most secure member of our nuclear deterrent triad and the added capability which TRIDENT brings to that mission makes the sea launched ballistic missile an increasingly attractive alternative.

Attack Submarine Forces

From 1973 until last year, the fiscally constrained minimum force level for SSNs was 90. During that period, the Joint Chiefs of Staff consistently identified a larger requirement and in consonance with the decision to increase force levels throughout the Navy, the SSN goal was raised to its current level of 100. While 100 SSNs still constitute an austere force, the increase does recognize a growing and increasingly formidable Soviet threat.

Regardless of force size, it is imperative that we retain qualitative superiority in this critical area of Naval Warfare. As the Soviets continue to construct new and increasingly sophisticated submarines, it becomes more difficult to maintain this qualitative edge. The Soviets are building fast, quiet, deep diving submarines. It will be a challenge to our technological competence to stay ahead of them in the future. The five year plan contains sufficient SSN 688 class submarines to permit us to reach the goal of 100.

The addition of bow-mounted vertical launch tubes to the SSN 688 provides a new dimension to the tactical capabilities of the attack submarine force and contributes to our distribution of offensive power.

Aircraft Carrier Force Levels

Funding last year of two NIMITZ class nuclear powered aircraft carriers and the expected extension of the service life of the USS MIDWAY will permit Navy to achieve its goal of 15 deployable CV/CVN by the end of calendar year 1990. The five year shipbuilding plan submitted with this budget shows an additional CVN in Fiscal Year 1988. However, we do not anticipate that the five year plan to be submitted with the FY 1985 budget will include a CVN. Based on their current material condition, we hope to be able to retain MIDWAY and CORAL SEA in service well into the 1990's, thus deferring the need for another new CVN start until 1990 or later.

Surface Combatant Forces

Due to the multiple types of warfare capabilities required within a broad mix of surface combatants, sizing of each ship class to produce the minimum required force is a difficult process.

Battleships augment the offensive power of carrier battle groups. Teamed together with cruisers and destroyers they are the predominant striking force of Surface Action Groups (SAG). They constitute the major naval gunfire support element in amphibious operations. Cruisers and destroyers operate over the entire spectrum of naval warfare; with the carrier battle groups, surface action groups, amphibious task forces and underway replenishment groups. They are designed to function in high threat areas and possess the requisite weapon systems, command and control facilities, engineering redundancy and endurance to conduct sustained combat operations at sea. Frigates, on the other hand, are less capable ships designed for open ocean escort duty either in lower threat areas or under the broad umbrella of more capable land or sea based forces. They are smaller, less capable, and less costly warships, and are generally optimized in only one warfare area, ASW.

Surface combatant force requirements are derived from our overall naval strategy and are necessarily somewhat dependent upon carrier and amphibious force levels and the breadth of sea lane defense projected in our national strategy. Since each combatant is an integral and indispensable member of a battle force, we have placed emphasis on total force capability vice numbers of ships, in developing a realistically attainable and capable minimum force level objective. Over the past few years, the requirements for surface combatants have remained stable. Support of all projected tasking requires four battleships, thirty-three guided missile cruisers, sixty-seven guided missile destroyers, thirty-seven destroyers and one hundred and one frigates. This is considered our minimum force level objective. Actual force levels to be achieved have become an affordability issue.

We have in hand thirty-one DD 963s which constitute our modern destroyer force. Our frigate inventory, both active and Naval Reserve, will be 95 at the end of FY 1983 and will grow to 114 before beginning to decline in the mid to late 1990s when the FF 1040 and FFG 1 classes reach the end of their expected service life. Thus both our destroyer and frigate requirements are basically satisfied with present ships having an average age of less than ten years. Several frigates are still to be delivered.

Two of the four battleship reactivations which we require have been approved by the Congress. These ships are the most survivable units afloat and provide a powerful addition to any naval force. Moreover, the awesome firepower of sixteen inch guns provides naval gunfire support for amphibious forces. We need to add the remaining two battleships to our active forces.

With the ten CG 47 class ships already authorized, those contained in our five year plan and existing CG/CGN class ships will sustain our cruiser requirements as older ships reach thirty years of life. The CG 47, however, adds AAW capability much needed in our fleet - firepower, quick reaction and the ability to operate effectively in an adverse electronic countermeasures environment. Therefore, we need to sustain the current building rate of three ships a year.

The most critical area in surface combatants is in guided missile destroyers. We are approaching block obsolesence of both the DDG 2 and DDG 37 class ships, thirty-three in all, which were constructed during the 1950's and early 1960's. All of these ships are essentially twenty years old and can not be predicted to have useful service lives beyond thirty years. These ships are now the numerical backbone of our battle group capable ships and we must start their timely replacement. We have spent four agonizing years in completing the conceptual and preliminary design of a new DDG. We have now defined the characteristics of DDG 51, the Arleigh Burke class, and are commencing contract design which will support the lead ship in the FY 1985 SCN program. DDG 51 is a highly capable and very survivable guided missile destroyer, designed to perform well in any mission area and with any battle force. This ship is the only surface combatant to be initiated in the 1980's.

Before concluding my remarks concerning surface combatants, it is appropriate to apprise you of our modernization efforts because they go hand in hand with new construction to keep our total force readiness apace of the threat. There are three principal thrusts to the modernization effort, improved ASW, improved AAW and addition of a powerful standoff capability against ships and shore targets. Although not a part of the SCN appropriation, I think you have direct interest in these improvements. The major modernization of our ASW capabilities consists of adding tactical acoustic towed arrays, SQR-18 series to FF 1052 and NRF FFG's and SQR-19 to DD 963 and active force FFG's. In addition all these ships will have either LAMPS I or LAMPS III capability and are already equipped with hull mounted active sonars. LAMPS is the only weapon system that surface ships can employ which has sufficient range to neutralize or destroy enemy SSN's prior to their weapons release against our forces. LAMPS III not only extends this weapons delivery capability by roughly a factor of two over LAMPS I but is also the only system that can be used to exploit the detection capability of new ASW sensors such as AN/SQR-19 TACTAS. Both LAMPS I and LAMPS III are essential components of surface ASW ships and each aircraft is being employed in ships which have ASW sensor suites comparable to the aircraft capability. LAMPS III in particular is urgently needed to equip our newest combatants, such as CG-47's, DD-963's and FFG-7's to keep pace with improvements in opposition submarines and submarine delivered weapons. Our ASW modernization program in the aforementioned classes of ships includes the necessary improvements in active and passive sensors, signal processing, fire control, and command and control systems to maintain U.S. advantages in ASW -LAMPS III is a necessary and essential part of this modernization effort. LAMPS III has met or exceeded our development goals and the first production aircraft is being delivered on schedule and within cost. The Navy needs a stable production line for this aircraft in order to fulfil our requirements and to maintain cost control of the program. In AAW our prime objectives are to add New Threat Upgrade (NTU) to existing Cruisers of the CG 16 and 26 classes and all of the nine CGN's and to install

Close In Weapon Systems (CIWS) for anti-ship missile defense in virtually all combatants. Some of the ships which receive the New Threat Upgrade may be selectively extended beyond thirty years of service life in order to maintain overall combatant force levels. The New Threat Upgrade will permit these ships to combat the majority of the threat of the 1990's. Although not as capable as AEGIS equipped cruisers or destroyers, ships with NTU will add diversity to our AAW capability and permit retention of SM-2 (ER) surface-to-air missile capability. The CIWS installations will provide an effective self defense system specifically designed to counter the sea-skimmer family of missiles. These systems will be installed in about 70 ships by the end of FY 1983 and we are continuing procurement and installation at the maximum practicable rate. The newest and most exciting capability being added through modernization is the long range TOMAHAWK cruise missile. Through a combination of Armored Box Launchers (ABL) and Vertical Launch Systems (VLS) in selected nuclear cruisers and 963 class destroyers we will add significant standoff strike capability. These launchers can accommodate a mix of anti-ship and land attack missiles with either conventional or nuclear warheads. This, in conjunction with VLS being installed in CG 47 class ships and designed into the DDG 51 class will add significant distribution of our offensive firepower. By the late 1980's true offensive power will reside not only in carriers but also in submarines and surface combatants. The broad application of cruise missiles to naval forces is the greatest step forward in the past two decades. Finally, our modernization efforts concentrate on correcting long standing safety and reliability problems in ship systems and in significant upgrades to survivability through fragment protection and improved fire fighting and damage control alterations.

Amphibious Forces

For many years after the Second World War, the Navy/Marine Corps team relied on wartime inventory for its amphibious lift. Faced with block obsolesence in the 1960s, a large building program was begun which resulted in the acquisition of most of our current inventory.

For many years, the requirement for amphibious forces was relatively static at a level required to lift the Assault Echelon (AE) of a Marine Amphibious Force (MAF). This MAF(AE) lift was, in the early 1980s, deemed inadequate to meet the growing worldwide requirement and in early 1982, our goal was raised to the lift of the MAF(AE) plus a Marine Amphibious Brigade (MAB). This requirement has been further refined to include only the Assault Echelon of the MAB as an interim goal with the lift of the full force by 1994.

The mix of requirements for various amphibious ships is determined by Marine Corps lift "fingerprints." These fingerprints establish totals of troops, square footage for vehicles, cubic footage for cargo and the number of spots for helicopters based on CH-46 equivalents. One ship needed to meet these requirements is the LSD 41 class, initially authorized in FY 1981. Three of these ships have been appropriated to date. This year we are requesting the initiation of a three year-five ship Multi-Year Procurement program for LSD 41's. In addition, this year marks the introduction of the lead ship of the LHD 1 class. The LHD 1 is a refinement of the LHA design and features a convertible mission capability. Ostensibly designed as a helo capable amphibious ship, the LHD can be converted easily and quickly to a sea control ship utilizing VSTOL AV-8B Marine aircraft.

Affordability considerations make it imperative to consider alterations in lieu of new construction. Therefore, this year we are requesting funds for a Service Life Extension program for the LPD-4 class. These ships are generally in good shape and given proper additional overhaul and restoration work, including upgrades to improve helo and LCAC lift, will continue to be vital assets through the 1990's.

Logistic Support Forces

The logistic support force has been sized to provide one large multi-product ship (AOE/AOR) on station with each carrier battle group. Currently there are eleven of these ships (four AOEs and seven AORs) in inventory. Commencing in FY 1986 we are requesting one AOE a year through FY 1988. The station ships accompany the Carrier Battle Group and themselves will be replenished by oilers (AO/TAO), ammunition ships (AE) and combat stores ships (AFS/TAFS) operating in Underway Replenishment Groups (URGS) from either CONUS or advanced bases. Another pressing need is to rebuild the oiler fleet which is primarily composed of ships over thirty years of age. Two ships of the TAO 187 class have been appropriated. We have a total oiler requirement equivalent to twenty-five of these ships.

Currently, we are three AEs short of our requirement. The three ships in the current five year plan will meet that goal and we are actively working the design of these ships. A production decision to continue to build AEs as replacements for those appropriated in the 1950's will be required in the next few years.

The two TAFS ships purchased from Great Britain in FY 1982 have proven to be excellent additions to our combat stores ship inventory. The final ship of that class is requested in this year's budget. The acquisition cost of this third TAFS includes propulsion plant spare parts held in the UK inventory and represents a bargain procurement to meet a pressing need for stores ships.

Mine Warfare Forces

For the past quarter century, the U.S. Navy has had to rely solely on a small group of ocean minesweepers (MSO), built in the mid to late 1950s. In the recent past, this force has been augmented by a mine sweeping helicopter capability. By the end of FY 1983 there will be only twenty-one MSOs, three in the active forces and eighteen in the Naval Reserve Force, augmented by twenty-two MCM helicopters. These ships are rapidly approaching the end of effective service life and require replacement as soon as possible. Congress appropriated funds in FY 1982 for the lead ship of a new class of Mine Countermeasures ship, the MCM 1, and a second ship of the class was appropriated in FY 1983. An acceptable risk force requires a total of fourteen of the MCM 1 class. These ships will be augmented by a class of Coastal Mine Hunter Sweepers, the MSH. The lead MSH is included in the FY 1984 budget. Seventeen MSHs are planned for construction. This total of 31 mine countermeasures ships represents a bare minimum requirement which will dictate sequential clearance of U.S. waters and a heavy reliance on our allies to keep their own waters swept. We believe that we are on the right course with the proper minimum mix of ships and helicopters to meet our mine countermeasure requirements within acceptable risk.

The balance of our requirements are needed to provide sufficient sealift to support our defense strategy and to support specific naval requirements in missile resupply, oceanographic research and care for combat casualties. I will now specifically address the FY 1984 SCN request.

FY 1984 Shipbuilding Request (VG-1)

The Navy's shipbuilding history over the past three decades has been one of feast or famine. This has resulted in approaching block obsolesence of guided missile battle group escorts, amphibious shipping, mobile logistic support ships and the piteous condition of the Mine Warfare ships. We are not requesting an inordinate buildup in the years to come, but rather an orderly period of sustained procurement intended to minimize increasing obsolesence of many of our ships. Over the next five years we are requesting funding for one hundred and forty-five ships which include one hundred and twenty-four new construction and twenty-one conversions, modernizations or acquisitions.

Execution of this five year plan provides for a gradual increase from the 511 ships currently in the deployable battle force to the 600 ship target which we will achieve by the end of Fiscal Year 1989. Once we reach the 600 ship goal we will move into a building program which sustains and more finely balances the elements of the Battle Force.

This plan is fully supportive of the balanced 600 ship Navy leading to the target goals of 15 Carrier Battle Groups, four Battleship Surface Action Groups, 100 Nuclear Attack Submarines, Amphibious Lift for a MAF(AE) plus MAB(AE) and the Mine Warfare and Mobile Logistic Support Forces required to support them. (VG-2) This year we are requesting funds for twenty-three ships including seventeen new construction ships and six conversions or acquisitions.

TRIDENT SSBN (VG-3)

This past year has been a highly successful one for the TRIDENT program. The first of the class, USS OHIO, completed all of its trials in an outstanding manner and is now conducting routine deterrent patrols. The second TRIDENT, USS MICHIGAN, delivered in August of 1982, has completed Post-Shakedown Availability and is in the midst of its workup period leading to initial deployment this summer.

The third TRIDENT submarine FLORIDA (SSBN 728) was delivered on 17 May 1983. Based on current planning the Electric Boat Company will deliver TRIDENT submarines to the Navy on an average of one every eight months over the next three years. This massive addition of firepower greatly increases the throwweight and survivability of the U.S. nuclear deterrent force.

Last year, the Congress appropriated funds to fully fund one D-5 configured TRIDENT submarine. This was in response to a Navy initiative to accelerate the D-5 program by introducing the D-5 missile in the FY 1981 ship. Increased funding is required for the FY 1981 lead D-5 ship in addition to that initially appropriated for its construction as a TRIDENT I ship. This budget request contains $436.0 million in the cost growth line to complete the 1981 TRIDENT as a D-5 capable submarine.

For construction of the eleventh TRIDENT in FY 1984 plus advance procurement for future ships, this year's budget requests $1,832.1 million for the TRIDENT program.

Nuclear Attack Submarine - SSN-688 Class (VG-4)

This year's budget requests authorization and appropriation for three SSN-688 class nuclear attack submarines which represent the forty-second through forty-fourth ships of this class. Of the forty-one previously funded by the Congress, twenty-one have delivered and the remaining twenty are under contract with three of those scheduled for delivery during the remainder of Fiscal Year 1983.

Despite the success of this class, fiscal constraints have precluded an Administration request for more than two SSN 688 a year since FY 1977. This year's request for three SSN-688 class ships reflects a renewed determination to achieve and maintain the goal of one hundred nuclear attack submarines. This will require the construction of at least twenty-one of these ships in the five year plan and the Navy requests your support in achieving that end.

This year we are requesting $2,042.4 million for construction of three SSN-688. This includes $336.0 million in long lead items for follow ships.

Aircraft Carrier Service Life Extension Program - CV SLEP (VG-5)

The CV SLEP Program was formulated in the late 1970's as the only economically feasible way to maintain adequate numbers of large deck carriers through the remainder of the twentieth century. The first ship to be inducted into the CV SLEP program was USS SARATOGA which entered the Philadelphia Naval Shipyard in

October 1980 and completed on schedule last month. The second ship to enter the SLEP program is USS FORRESTAL (CV 59) which began its 28 month program in January of this year, also at the Philadelphia Naval Shipyard. Given the experience gained in the execution of the SARATOGA project, I am confident that FORRESTAL will also experience a highly successful service life extension. We are already well along in the planning stage for the third ship, USS INDEPENDENCE, which will enter Philadelphia Naval Shipyard in April of 1985. The long lead funding of $95.9 million requested in this year's budget is for the INDEPENDENCE SLEP.

Guided Missile Cruiser - CG 47 Class (VG-6)

The CG 47 class ship is our highest priority surface combatant. The FY 1984 budget includes a request for three, the eleventh, twelfth and thirteenth ships of the class. The first ship of the class, USS TICONDEROGA, was authorized and funded in the FY 1978 budget and was commissioned 22 January 1983 at Pascagoula, Mississippi. Thus, the first of the class has joined the fleet and will deploy in October 1983, an unprecedented nine months after commissioning. YORKTOWN, CG 48, has been launched, was christened 16 April 1983 and will commission in July 1984.

The AEGIS combat system installed in the CG 47 class is the most advanced anti-air warfare system in the world and is designed to counter the full spectrum of anti-ship missile threats of the 1990's and beyond. It provides area air defense in a high-density, high-threat, anti-ship missile environment. Our continuing assessment of Soviet missile-launching capabilities confirms that CG 47 class ships are urgently required in the fleet in numbers.

The CG 47 class cruiser is the third combatant class to use the proven hull of the SPRUANCE destroyer. By adopting this hull to the more heavily armed KIDD class guided missile destroyer, some of the original SPRUANCE growth margin was used. USS TICONDEROGA with even more armament continues this practice using an additional portion of the original SPRUANCE margins. USS TICONDEROGA displaces 9600 tons but retains 600 tons of service life margin. Well within her limiting displacement of 10,200 tons, she has already proven herself safe, stable and highly capable at sea. USS TICONDEROGA is a quality product and her addition to the fleet will add a new dimension to Battle Group AAW protection. In addition to a quantum improvement in anti-air warfare, the CG 47 class has superior capabilities in anti-submarine and anti-surface ship warfare as well as improved passive protection. CG 47 class ships will operate as an essential component of battle groups formed around our aircraft carriers, and will enhance the battle group's ability to fight and survive in the most hostile environment. CG 47s will also be utilized with IOWA class Battleships and other surface combatants to form potent Surface Action Groups.

These ships are now being constructed at two shipyards, Ingalls Shipbuilding at Pascagoula, Mississippi and Bath Iron Works in Bath, Maine.

The funding requirement for the CG 47 class in FY 1984 is $3435.0 million for three ships.

Arleigh Burke Class Guided Missile Destroyer - DDG 51 (VG-7)

ARLEIGH BURKE (DDG 51) is a capable multi-mission ship with proven engineering and combat systems. This class will supplement the SPRUANCE class Destroyers and TICONDEROGA and VIRGINIA class Cruisers in the Battle Groups of the 1990s. Anti-Air Warfare, Anti-Submarine Warfare, Anti-Surface Warfare and strike capabilities are compatible with, and designed to supplement, CG 47 and other combatants which will be present in the fleet of the 1990's.

DDG 51 introduces a new hull form designed with better predicted survivability than her predecessors. KEVLAR armor plating protects vital spaces and a partial Collective Protection System provides for the first time in a U.S. Navy combatant for CBR defense. Steel is used throughout the hull and in all vital areas of the superstructure. Steel construction, with increased resistance to blast over pressure, fragment and fire damage plus Electromagnetic Pulse protection designed into major electronics equipment, enhances survivability in any battle scenario.

The lead ship engineering plant employs the same propulsion train used in CG 47 and takes advantage of the cost benefits associated with that proven, reliable system. A three generator electric plant is arranged to support survivability. New development systems, such as the Rankine Cycle Energy Recovery (RACER) System, are ongoing and could be incorporated in later flights of the class, or in future classes, if and when technical feasibility, reliability and cost effectiveness have been demonstrated.

DDG 51 incorporates the best applied technology available in anti-air warfare. Based on a phased array radar, ARLEIGH BURKE provides unique advantages in AAW over older guided missile ships in terms of performance, reaction time, firepower, availability and area coverage. The SPY-1D radar can detect targets at long ranges in clear environments and offers quantum improvements in hostile environments which include jamming, high clutter caused by rain, high sea state and chaff. The AAW weapon system will provide a fast response time from initial target detection to a missile leaving its vertical launch rails. Armed with SM-2 Missiles, two PHALANX Close-In Weapon Systems and a MK-45 5"/54 gun having laser guided projectile capability, AAW capability is optimized by high firepower and fast reaction and specifically designed to counter the threat expected in the 1990's and beyond.

A major strike warfare (STW) capability is designed into ARLEIGH BURKE which is a significant part of her character and versatility. The Arleigh Burke class will be armed with TOMAHAWK Cruise Missiles that can be programmed onboard. These missiles can be fired with great accuracy at long-range against targets ashore as well as enemy ships. An important adjunct to the strike capability inherent in CV's, DDG 51 provides Task Group Commanders with flexibility and versatility in offensive operations not heretofore available. The multi-mission character of DDG 51 will allow her to conduct strike operations as a part of a Surface Action Group, a Battle Group, an Underway Replenishment Group or an Amphibious Force. In addition to TOMAHAWK, she carries HARPOON for anti-surface warfare (ASUW) operations. This capability, in combination with the accuracy inherent in the laser controlled SEAFIRE Gun Fire Control System with guided projectiles, is a major contributor to her character as the most capable destroyer ever designed in the U.S.

DDG 51 will have a state-of-the-art long-range hull sonar system. Two batteries of Torpedo Tubes and vertically launched, extended range Anti-Submarine Rockets will provide for fast reaction attack. The AN/SQR-19 towed array sonar is designed into the ship to provide long-range passive detection, classification and localization capabilities for both ASW and ASUW over-the-horizon targeting engagements. The ship's combat systems include modern, complete air control facilities for coordinated operations with the entire spectrum of ASW aircraft (as well as CAP and strike aircraft). The flight deck is sized for LAMPS MK III operations and MK III electronics are design budgeted into the ship. The request this year for advance procurement for the DDG 51 is $99.5 million in support of the lead ship to be requested for full funding next year.

Battleship - BB 61 Class (Reactivation) (VG-8)

USS NEW JERSEY was commissioned in December, within budget and ahead of schedule. The excitement and enthusiasm evident at NEW JERSEY's commissioning from the President to each Seaman on board surely reinforced the wisdom of the decision to bring these great ships back to active service. Last year the Congress approved full funding for the reactivation of IOWA. That ship has completed dry dock work at the Avondale Shipbuilding Company and is currently at Ingalls Shipbuilding in Pascagoula, Mississippi for the remainder of the modernization and reactivation package. The contract for this work has been signed with every indication that IOWA will deliver within budget and six months ahead of schedule.

Despite the vocal chorus of those who think these ships are obsolete, I personally believe that we cannot find a more cost effective procurement program. These ships provide incredible firepower and survivability unequalled in post war ships. We need all four of these ships returned to the Fleet. This year's request contains $57.7 million for long lead items for the third battleship, the MISSOURI.

Landing Ship Dock - LSD 41 Class (VG-9)

To date the Congress has appropriated funds for three LSD 41 class ships. These ships have been contracted to Lockheed Shipbuilding Corporation at the rate of one per year.

This year's five year plan recognizes the requirement to continue building this class ship and proposes a five ship-three year Multi-Year Competive Procurement, which we estimate will save $246.0 million compared to the traditional annual procurement strategy.

This ship has been designed in concert with the design of the Landing Craft Air Cushion and will carry four of those craft. This provides a significant improvement in our ability to rapidly transport heavy combat equipment over a much wider range of landing areas. Navy this year is requesting $509.0 million for the LSD 41 program which includes $182.1 million in advance procurement for the Multi-Year program.

Amphibious Assault Ship - LHD 1 (VG-10)

This year Navy is requesting full funding for the lead ship of a new class of large amphibious ship, the LHD 1 class. These ships, with their large capacity to lift troops and equipment constitute the linch pin of our plan to increase Marine Corps amphibious lift. As mentioned previously, the ship is designed to permit it to convert to sea control and power projection missions when its amphibious tasks are completed. In this role, Marine Corps AV-8 aircraft would be embarked along with modular support vans to permit the ship to operate in a variety of missions.

The design of this ship is based on the current LHA design but has been modified to accommodate three LCAC and handle VSTOL aircraft. For FY 1984, Navy is requesting $1,379.7 million for the lead LHD 1.

Amphibious Service Life Extension Program - LPD SLEP (VG-11)

As noted in the previous section on Amphibious Warfare, lift requirements have grown over the past two years. While we are actively pursuing new construction of LHD 1 and LSD 41 class ships, we simply cannot afford the lift we require unless we fully utilize the amphibious assets already in inventory.

The LPD 4 class is approaching the mid point of a traditional thirty year service life and all ships of the class are in good material condition for their age. The proposed SLEP will add ten to fifteen years to their life and provide the Navy/Marine Corps team with ships of increased capability. Current planning for the SLEP will provide capacity for two LCAC and four helicopters vice one LCAC and two helicopters which can be accommodated in the present configuration.

Navy considers this a prudent and cost effective way to ensure adequate lift for the future. The first LPD 4 SLEP is currently scheduled for FY 1986. This year's budget requests advance procurement funds of $13.8 million.

Mine Countermeasures Ship MCM 1 Class (VG-12)

No segment of Naval Warfare has been underfunded for so many years as has the Mine Warfare community. Despite the large stockpiles of sophisticated modern mines posessed by the Soviets, we have only recently begun to respond to the threat. The lead ship of the new MCM class was funded in FY 1982 and the second ship was appropriated in FY 1983 and directed to a second source ship builder.

It is imperative that we move now to series production. The five year plan requests four MCM 1 class ships in each of the next three years. These ships are urgently needed to replace the obsolete MSOs which were built in the 1950's. The MCM 1 class is designed to permit the breakout of U.S. Forces from CONUS ports and then to accompany deploying forces overseas and conduct mine clearance operations in theater.

Two of the three major combat systems have been approved for service use or will be within the next quarter. Approval for Full Production of the third system, the AN/SSN-2 Precision Navigation System (PINS) was delayed slightly by an urgent real world operational requirement for the test ship, but that evaluation is now back on track and the system will be ready well in advance of its required date.

As the result of a design problem which has surfaced in the MCM, Navy has delayed award of the construction contract for the FY 1983 ship. It is expected that this problem will be resolved with minimal impact on cost and schedule and that the contract can be awarded by May 1983.

This year the Navy requests $381.0 million for four MCM 1 ships.

Minesweeper Hunter - MSH 1 (VG-13)

To augment the MCM 1 in the breakout clearance of U.S. ports, we require a coastal minesweeper hunter. After breakout of naval forces these ships will provide clearance for commercial harbors and continuing clearance/check sweep capability for major CONUS ports.

In order to build the minimum requirement of seventeen ships of this class, Navy has adopted a highly innovative acquisition strategy which totally involves the shipbuilding industry in the design process and takes advantage of industry wide competition and innovation in order to reduce costs.

The Request for Proposal for the MSH was released to industry on 7 December 1982 and the proposals were delivered to the Naval Sea Systems Command on 15 March. From these proposals, four builders have been selected for a competitive Phase I contract design. This will permit selection of two of the four builders as finalists in a Phase II competitive design effort culminating in award of the lead ship to the successful builder in August of 1984. In this process, Navy will take full advantage of the latest technical advances in small ship construction. The mission equipment to be installed in the MSH is planned to be either identical to or a subset of proven mission equipment developed for the MCM program. $65.0 million is requested for the lead ship in FY 1984.

Ocean Survey Ship - TAGS(C) (VG-14)

The two ships requested in FY 1985 are urgently required to replace overage and unreliable ships in the current inventory. These merchant ship conversions conduct underwater surveys in direct support of the TRIDENT SSBN program. The advent of longer range missiles permits TRIDENT submarines to operate in greater areas of the oceans with an increased requirement for survey coverage.

This year Navy is requesting $34.5 million for long lead material leading to conversion of two TAGS in FY 1985.

HOSPITAL SHIP - TAH (VG-15)

The lack of afloat medical care is widely recognized as a serious deficiency in our ability to support combat operations ashore, employing either amphibious or RDJTF forces. Afloat medical care in the form of hospital ships is a part of the overall continuing care needed to handle casualties which begins with the combat unit itself and extends through fleet hospital units ashore to CONUS hospitals for eventual recovery of combat casualties.

Congress appropriated $300.0 million in FY 1983 for the lead ship of this class. The House Appropriations Committee inserted language expressing its concern regarding the availability of acute care beds in the ships. Navy is addressing this problem with the two competing teams of builders and designers. I am assured that we can provide adequate numbers of acute and limited care beds under the $560.0 million cost estimate. This year Navy requests $260.0 million for the second TAH.

Fleet Ballistic Missile Cargo Ship - TAK(FBM) (VG-16)

This proposed conversion of an existing cargo hull is required to provide logistic support by resupplying replacement missiles, major missile components, bulk stores, fuel and repair parts to SSBN refit sites at Holy Loch, Scotland, Kings Bay, Georgia and Charleston, South Carolina. This ship will replace an overage ship in current inventory. This year Navy requests $.9 million in advance procurement funds for the TAK(FBM).

Combat Stores Ship - TAFS (VG-17)

In FY 1982 the Congress appropriated funds for the purchase of two Combat Stores ships from Great Britain. These ships, now designated USNS SPICA and USNS SIRIUS, have been highly successful in supporting forward deployed U.S. Naval Forces throughout the world. As a result of a continuing drawdown in the Royal Fleet Auxiliary, the logistics arm of the Royal Navy, the RFA STROMNESS has been made available for sale to our Military Sealift Command. This is a sister ship to those purchased in FY 1982. The request for $16.1 million includes $3.1 million for propulsion plant spares which will be required for maintenance of all three ships of the class. New construction costs for this ship in FY 1984 would approach $400.0 million.

Fleet Oiler - TAO 187 Class (VG-18)

The TAO 187 program is a well defined program. Concerns over the design and the cost of the lead ship have been resolved. The contract for the lead ship, funded in FY 1982, was awarded to Avondale at a cost which was less than expected. The first follow ship, funded in FY 1983, has also been awarded to Avondale.

This year the request is for $524.6 million for the third, fourth and fifth ships of the class. The requirement for new fleet oilers is pressing, given the age and capability of the existing oiler fleet.

Fast Logistic Ship - TAKR (VG-19)

This years budget request completes the process begun in FY 1981 to acquire and convert eight SL-7 class high speed container ships. In FY 1981 six of the ships were purchased. The remaining two were purchased in FY 1982 and conversion of the first four was also funded in that year. Last year the Congress decided that the conversion should be staggered so that at least four of the ships would always be available to support contingency operations. This decision resulted in appropriation of $44.0 million in FY 1983 for long lead material. The FY 1984 budget requests $246.5 million for the conversion of the final four ships which are already covered under fixed-price options to the FY 1982 conversion contracts. When converted to Roll on/Roll off (RO-RO) configuration, the TAKR will provide the Department of Defense with a true capability to lift enormous amounts of equipment at high speed.

Landing Craft Air Cushion - LCAC (VG-20)

The LCAC provides the Navy/Marine Corps Amphibious team with a high speed craft, less restricted by surf and beach conditions than conventional craft, which can lift heavy equipment across the shore from over the horizon. This craft greatly expands the amount of coastline across which amphibious forces can be landed, and in coordination with helicopter-borne assault forces, greatly increases the maneuverability and tactical options of our Amphibious Forces.

The six craft appropriated over the last two years are under contract with Bell Aerospace/Textron. The company has completed construction of a new facility which is designed for series production of LCAC in the most efficient possible manner.

The request for six LCAC in FY 1984 of $161.1 million includes $29.5 million in advance procurement for the 12 craft required in FY 1985.

Craft (VG-21)

The FY 1984 request includes $119.3 million for service craft and $176.1 million for landing craft. The Landing Craft Air Cushion (LCAC) request for $161.1 million is noted above. In addition, $15.0 million is requested to purchase the final 18 LCM 8 required for the TAK convert and charter program. The $119.3 million for Service Craft will be used to procure fourteen barges (YC), five floating cranes (YD), five training craft (YP), nine large tugs (YTB) and one Patrol Boat (Multi-Mission) (PBM).

Cost Growth/Escalation (VG-22)

The $674.7 million reflected in this year's budget request as cost growth derives from several sources. As previously mentioned, the largest part is the $436.0 million required to complete the FY 1981 TRIDENT SSBN as the lead D-5 configured ship. Other requirements are $107.3 million for the FY 1982 CG 47 second source costs, $21.3 million for the FY 1975 TRIDENT, $52.2 million for the FY 1976 TRIDENT, $29.9 million for the FY 1977 TRIDENT, $3.0 million for the FY 1978 TRIDENT and $25.0 million for the FY 1983 SSN 688s. Escalation requested in the FY 1984 budget is as follows: $10.0 million for FY 1977 TRIDENT, $5.2 million for FY 1977 SSN 688, $52.4 million for the FY 1978 TRIDENT, $.7 million for the FY 1978 SSN-688, $28.9 million for the 1979 FFG 7, $5.4 million for the 1980 CVN, $15.9 million for the 1980 SSN 688, $15.9 million for the FY 1981 SSN 688 and $62.4 million for the FY 1982 CG 47. The FY 1983 additional funds are required because the DoD failed to provide adequate escalation to match the assignment of DoD January 1982 economic indices, although the total amount has been reduced to reflect the new January 1983 indices. These funds are $1.1 million for SSN-688, $4.6 million for TRIDENT, $82.8 million for CVN, $7.3 million for MCM, $5.7 million for FFG, $76.3 million for CG 47, and $1.0 million for the LSD 41 program.

Strategic Sealift

The Ready Reserve Force (RRF) is a subset of the National Defense Reserve Fleet which provides timely sealift capability to promptly outload and transport those forces deployed in a contingency or reinforcement scenario. Many U.S. Flag merchant ships are removed from service and sold for their scrap value each year. Many of these ships have years of servicable life remaining but have become commercially uneconomical to operate under current market conditions. This funding line of $31.0 million will permit the government to purchase several usuable ships at or slightly above their scrap value for retention in the Ready Reserve Force. No quantity is given in the estimate since purchase price is a dynamic combination of availability, condition and scrap market conditions.

Outfitting/Post Delivery

The FY 1984 request includes $204.2 million for the outfitting of new ships. Post Delivery requirements for the correction of construction and acceptance trial deficiencies total $124.2 million.

This concludes my presentation. I thank you for this opportunity to present to you the Navy's shipbuilding plan and I hope that it will be helpful to you in your forthcoming deliberations. This committee has historically been a major factor in support of a strong Navy and I earnestly request your continuing support.

VICE ADMIRAL ROBERT L. WALTERS, U. S. NAVY

Vice Admiral Robert L. Walters was born in Oblong, Illinois June 25, 1926. Following a year of Navy enlisted duty he entered the U.S. Naval Academy in 1945 and graduated with the class of 1949. His first assignment was aboard the battleship USS MISSOURI (BB 63) where he participated in the invasion of INCHON and in several other naval bombardment missions during the early phases of the Korean War. He subsequently served in USS KEPPLER (DDE 765), USS NORFOLK (DL 1), and successively on the staffs of Commander Battleship Division Two and Commander Cruiser Force, U.S. Atlantic Fleet.

In December 1962, he was Executive Officer on the commissioning crew of USS BERKELEY (DDG 15). He then commissioned USS BROOKE (FFG 1) as Commanding Officer. This was followed by a tour as Executive Officer of USS PROVIDENCE (CLG 6) and as Commanding Officer of USS BELKNAP (CG 26).

In assignments ashore, Admiral Walters has served in the Strike Warfare Division in the Office of the Chief of Naval Operations, as Project Manager for Anti-Ship Missile Defense in the Naval Ordnance Systems Command, as Commanding Oficer Naval Ship Weapon Systems Engineering Station Port Hueneme, as Project Manager for Surface Ships, Naval Material Command and as Deputy Commander for Surface Combatant Ships, Naval Sea Systems Command. He attended the U.S. Naval Postgraduate School, Monterey, California graduating with a BSEE degree and attended Auburn University, where he graduated with an MBA. He also attended the Armed Forces Staff College in Norfolk, Virginia and the Air War College at Maxwell AFB, Montgomery, Alabama. During his last tour in Washington, D.C., he also served as Chairman of the NATO Seasparrow Steering Committee which consisted of seven NATO member nations.

In September 1977, Admiral Walters reported as Commander, Cruiser-Destroyer Group EIGHT. As a Battle Group Commander, he served as Commander Battle Group TWO aboard USS INDEPENDENCE (CV 62) in the SIXTH Fleet, as Commander Task Force 21 embarked in USS DWIGHT D. EISENHOWER (CVN 69) during GULFEX 79 in the Gulf of Mexico, and in command of other Battle Groups under Commander SECOND Fleet. In November 1979, he reported to the Office of the Chief of Naval Operations as Director, General Planning and Programming Division/Department of the Navy Program Information Center. On 28 May 1981, Admiral Walters reported to his present duty as Deputy Chief of Naval Operations (Surface Warfare).

Admiral Walters' awards include the Legion of Merit with two Gold Stars, in lieu of second and third awards, the Bronze Star and Navy Commendation Medals with Bronze V for Combat, the Joint Service Commendation Medal, the Combat Action Ribbon and numerous campaign ribbons and unit awards.

Admiral Walters is married to the former Diana Moomau of Petersburg, West Virginia. They have two sons, Andy and John.

NAVY FIVE YEAR SCN PLAN
FISCAL YEAR 1984-1988
CONGRESSIONAL SUBMISSION

	FY 84	FY 85	FY 86	FY 87	FY 88
TRIDENT	1/1832.1	1/1988.2	1/1926.5	1/2054.2	1/2186.5
SSN-688	3/2042.4	4/2999.2	4/3155.8	5/3849.9	5/4111.3
CVN	—	—	852.4	1092.7	1/3793.9
CV SLEP	95.9	1/794.0	108.2	1/810.1	267.8
CG-47	3/3435.0	3/3519.3	3/3679.9	3/3817.4	2/2822.0
DDG-51	99.5	1/1363.7	161.0	3/3174.0	5/5164.0
DD-963	—	—	—	247.8	1/1096.7
BB (R)	57.7	1/559.8	1/418.4	—	—
LSD-41	1/509.0	2/676.2	2/625.5	2/836.0	2/885.5
LHD-1	1/1379.7	113.5	1/1212.8	125.1	1/1347.3
AMPHIB SLEP	13.8	46.2	1/292.4	3/857.8	3/873.2
LPDX	—	—	—	119.1	1/927.7
MCM	4/381.0	4/350.4	4/365.5	—	—
MSH	1/65.0	—	4/280.0	4/295.0	4/306.0
AD	—	—	—	1/509.0	1/508.8
AE	—	—	1/497.3	1/383.1	1/395.0
AFS	—	—	—	1/449.9	—
AOE	—	—	1/807.9	1/631.9	1/657.0
TAGS (C)	34.5	2/224.1	—	—	—
TAH (C)	1/260.0	—	—	—	—
TAK (C)	.9	1/96.5	—	—	—
TAFS (A)	1/16.1	—	—	—	—
TAGM (C)	—	46.0	1/134.0	—	—
TAGOS	—	2/135.8	2/128.9	2/132.5	—
TAO	3/524.6	4/920.0	4/908.9	4/936.0	4/1045.0
TAKR	4/246.5	—	—	—	—
TARC	—	—	1/397.2	—	—
LCAC	(6) 161.1	(12)266.0	(12)275.0	(12)288.3	(12)306.7
SERV CRAFT	119.3	148.7	199.7	158.0	146.2
LAND CRAFT	15.0	—	—	—	—
COST GROWTH	674.7	—	—	—	—
ESCALATION	375.6	—	—	—	—
STRAT SEALIFT	31.0	34.0	41.0	37.0	31.0
OUT	204.2	238.6	208.8	238.2	317.5
PD	124.2	178.8	119.5	205.2	135.7
TOTAL	**12,698.8**	**14,699.0**	**16,796.6**	**21,248.2**	**27,324.8**
SHIP COUNT	**17/6**	**21/5**	**28/3**	**28/4**	**30/3**

FY 1984 BUDGET
SHIPBUILDING AND CONVERSION NAVY (SCN)
($ IN MILLIONS)

PROGRAM		NUMBER	BUDGET REQUEST
TRIDENT		1	$1,525.6
TRIDENT A.P.		–	306.5
ATTACK SUBMARINE		3	1,706.4
ATTACK SUBMARINE A.P.		–	336.0
CARRIER SLEP (CV-SLEP) A. P.		–	95.9
GUIDED MISSILE CRUISER (CG-47)		3	3,431.4
GUIDED MISSILE CRUISER A.P. (MK45 GUN MT)		–	3.6
GUIDED MISSILE DESTROYER A.P.		–	99.5
BATTLESHIP A.P.		–	57.7
LANDING SHIP DOCK (LSD-41)		1	326.9
LANDING SHIP DOCK A. P.		–	182.1
AMPHIBIOUS ASSAULT SHIP (LHD-1)		1	1,379.7
AMPHIBIOUS SLEP (LPD-4 SLEP) A.P.		–	13.8
MINE COUNTER MEASURES SHIP (MCM)		4	381.0
MINE SWEEPER HUNTER (MSH)		1	65.0
OCEAN SURVEY SHIP (TAGS) A.P.		–	34.5
HOSPITAL SHIP (TAH)		1*	260.0
MISSILE RESUPPLY SHIP (TAK-FBM) A.P.		–	.9
COMBAT STORES SHIP (TAFS)		1**	16.1
FLEET OILER (TAO)		3	524.6
FAST LOGISTICS SHIP (TAKR)		4*	246.5
LANDING CRAFT		–	146.6
LCAC A.P.		–	29.5
SERVICE CRAFT		–	119.3
STRATEGIC SEALIFT		–	31.0
COST GROWTH		–	674.7
ESCALATION		–	375.6
OUTFITTING		–	204.2
POST DELIVERY		–	124.2
TOTALS	17 NEW CONST. 5 CONVERSIONS* 1 ACQUISITION **	23	$12,698.8

TRIDENT SUBMARINE - SSBN

Mission:

To provide an undersea strategic missile system to ensure that the United States continues to maintain a credible, survivable deterrent, independent of forseeable threats.

CHARACTERISTICS

LENGTH: 560 FT
NAV DRAFT: 36 FT
PROPULSION: Nuclear
WEAPONS: 24 SLBM Missiles, Torpedoes

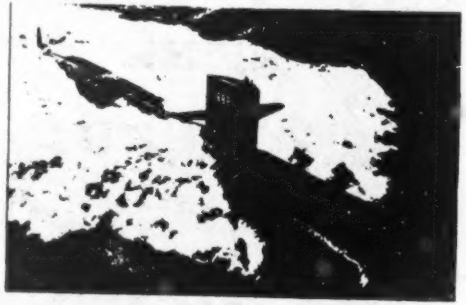
BEAM: 42 FT
DISPLACEMENT (SUBMERGED): 18, 700 Tons
SPEED: 20+ KTS

FUNDING REQUEST	NUMBER	COST	BUILDER
FY 1984 PROGRAM:	1 SHIP	$1,832.1 MILLION	ELECTRIC BOAT

NUCLEAR ATTACK SUBMARINE - SSN 688

Mission:

To destroy enemy ships, primarily submarines, in order to prohibit the employment of such forces in attack and destruction of U.S. and Allied targets.



CHARACTERISTICS

LENGTH:	360 FT	BEAM:	33 FT
NAV DRAFT:	32 FT	DISPLACEMENT:	6,900 Tons
PROPULSION:	Nuclear	SPEED:	20+ KTS
WEAPONS:	Torpedoes, HARPOON, TOMAHAWK		

FUNDING REQUEST	NUMBER	COST	BUILDERS
FY 1984 PROGRAM:	3 SHIPS	$2,042.4 MILLION	NEWPORT NEWS ELECTRIC BOAT

CARRIER SERVICE LIFE EXTENSION PROGRAM-CV SLEP

Mission:

To operate aircraft and engage in attacks on targets afloat and ashore.

CHARACTERISTICS (USS INDEPENDENCE)

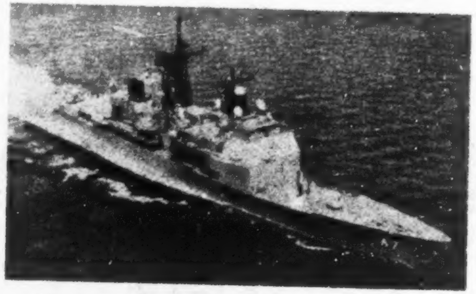
LENGTH:	1,070 FT	BEAM:	129.5 FT
NAV DRAFT:	37 FT	DISPLACEMENT:	79,300 Tons
CATAPULTS:	4	SPEED:	34 KTS
AIRCRAFT:	1 Carrier Air Wing, 83 Aircraft		

FUNDING REQUEST	COST	INDUSTRIAL SITE
FY 1984 PROGRAM:	$95.9 MILLION (Advance Procurement)	PHILADELPHIA NAVAL SHIPYARD

GUIDED MISSILE CRUISER - CG-47

Mission:

To destroy enemy aircraft, missiles, submarines and surface ships in order to prohibit the employment of such forces against U.S. forces. CG-47 class ships will normally be assigned to carrier battle groups or surface action groups.



CHARACTERISTICS

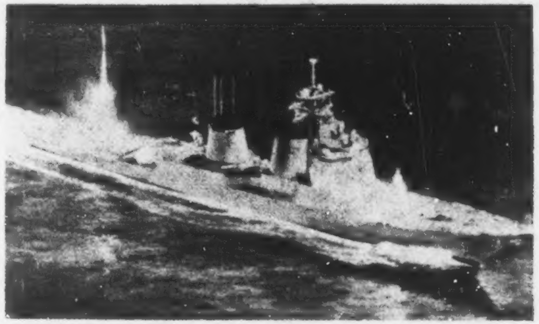
LENGTH: 563 FT
NAV DRAFT: 31 FT
PROPULSION: Gas Turbine
BEAM: 55 FT
DISPLACEMENT: 9,600 Tons
SPEED: 30+KTS
WEAPONS: AEGIS Combat System, Vertical Launch System SM-2 MR, 2 5"/54 Guns, TOMAHAWK, HARPOON, TORPEDOES, Close in Weapons System (CIWS), LAMPS MK III Helicopter, CHAFFROC.

FUNDING REQUEST	NUMBER	COST	BUILDER
FY 1984 PROGRAM:	3 SHIPS	$3435.0 MILLION	INGALLS BATH IRON WORKS

GUIDED MISSILE DESTROYER - DDG 51

Mission:

To destroy enemy aircraft, missiles, submarines and surface ships. The DDG 51 will be employed as a part of a Carrier Battle Group, Surface Action Group, Underway Replenishment Group or Amphibious Group.



CHARACTERISTICS (Tentative pending contract design)

LENGTH:	466 FT	BEAM:	Less Than 60 FT
NAV DRAFT:	20 FT	DISPLACEMENT:	8,200 Tons
PROPULSION:	Gas Turbine	SPEED:	Over 30 KTS

WEAPONS: AEGIS Combat System, Vertical Launch System, TOMAHAWK, SM-2 MR, CHAFFROC, VLA, SEAFIRE /Guided Projectile.HARPOON, Torpedoes, 1 5"/54 gun.

FUNDING REQUEST	COST	BUILDER
FY 1984 PROGRAM:	$99.5 MILLION (Advance Procurement)	TBD

BATTLESHIP REACTIVATION - BB(R)

Mission:

To conduct prompt and sustained combat operations at sea, worldwide, in support of national interests.

CHARACTERISTICS

LENGTH:	887 FT	BEAM:	108 FT
NAV DRAFT:	38 FT	DISPLACEMENT:	58,000 TONS
PROPULSION:	212,000 SHP	SPEED:	30 + KTS

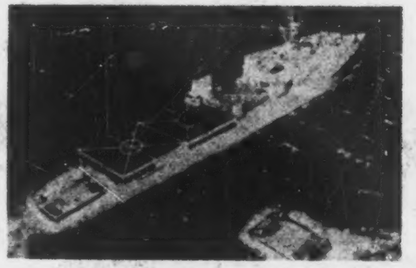
WEAPONS: 9 16 Inch guns, 12 5 inch guns, 32 TOMAHAWK, 16 HARPOON, 4 Close in Weapons Systems (CIWS)

FUNDING REQUEST	COST	BUILDER
FY 1984 PROGRAM:	$57.7 MILLION (Advanced Procurement)	TBD

LANDING SHIP DOCK - LSD-41

Mission:

To transport and launch loaded amphibious craft and vehicles with their crews and embarked personnel in amphibious assault operations.



CHARACTERISTICS

LENGTH:	609 FT	BEAM:	84 FT
NAV DRAFT:	19.5 FT	TROOP LIFT:	504*
PROPULSION:	33,000 SHP	LCAC:	4
SPEED:	20+KTS	FULL LOAD DISPLACEMENT:	15,745 Tons

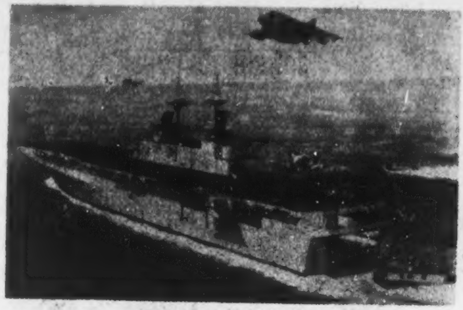
* 338 Troops plus 102 surge capacity; 64 assault craft unit accommodations.

FUNDING REQUEST	NUMBER	COST	BUILDER
FY 1984 PROGRAM:	1 SHIP	$509.0 MILLION	LOCKEED FY 81-FY 83 FY84 COMPETITIVE MULTI-YEAR

AMPHIBIOUS ASSAULT SHIP - LHD 1

Mission:

To embark, deploy and land elements of a major Marine landing force in an assault by helicopters, VSTOL aircraft, landing craft and amphibious vehicles. The LHD class will also operate AV-8s in the attack role.



CHARACTERISTICS

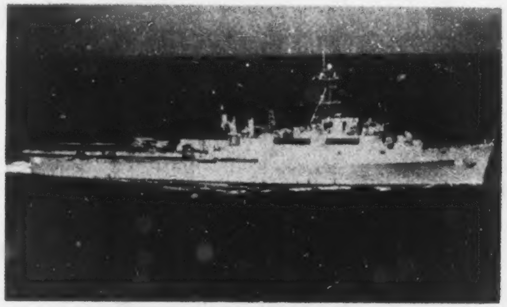
LENGTH:	840 FT	BEAM:	106 FT
NAV DRAFT:	26 FT 1 IN	FULL LOAD DISPLACEMENT:	39,384 Tons
PROPULSION:	70,000 SHP	SPEED:	20 + KTS
TROOP CAPACITY:	1,873	LCAC:	3
HELICOPTER SPOTS:	42 CH-46 equivalents		

FUNDING REQUEST	NUMBER	COST	BUILDER
FY 1984 PROGRAM:	1 SHIP	$1,379.7 MILLION	INGALLS

AMPHIBIOUS SERVICE LIFE EXTENSION PROGRAM
LPD 4 SLEP

Mission:

To transport and land troops and their essential equipment and supplies by means of embarked landing craft or amphibious vehicles augmented by helicopter lift.



CHARACTERISTICS

LENGTH: 570 FT
NAV DRAFT: 23 FT
PROPULSION: 24,000 SHP
TROOPS: 930
HELICOPTERS: 4*

BEAM: 106 FT
DISPLACEMENT: 16,700 Tons
SPEED: 21 KTS
LCAC: 2*

*After SLEP

FUNDING REQUEST	COST	INDUSTRIAL SITE
FY 1984 PROGRAM:	$13.8 MILLION (Advance Procurement)	TBD

MINE COUNTERMEASURES SHIP - MCM 1

Mission:

To hunt, neutralize and sweep mines in CONUS waters, choke points and overseas areas.

CHARACTERISTICS

LENGTH:	217 FT	BEAM:	39 FT
NAV DRAFT:	10.4 FT	SPEED:	14 KTS
PROPULSION:	2,280 SHP	HULL:	Wood/GRP

EQUIPMENT: Mine Hunting Sonar SQQ-30, Mine Neutralization System (MNS), Precise Navigation System AN/SSN-2

FUNDING REQUEST	NUMBER	COST	BUILDER
FY 1984 PROGRAM:	4 SHIPS	$381.0 MILLION	PETERSON MARINETTE MARINE

MINESWEEPER HUNTER - MSH 1

Mission:

To hunt and neutralize alll types of mines in CONUS coastal waters and the approaches to CONUS ports.

CHARACTERISTICS

LENGTH: 150 FT (EST)
PROPULSION: TBD
SPEED: TBD

BEAM: TBD
DISPLACEMENT: 470 Ton (EST)
HULL: Wood or Grp or Combination

EQUIPMENT: * Mine Hunting Sonar, SQQ-30 (:Variant), Mine Neutralization System (Variant)
Precision Navigation System AN/SSN-2
* Equipment down sized for coastal mission

FUNDING REQUEST	NUMBER	COST	BUILDER
FY 1984 PROGRAM:	1 SHIP	$65.0 MILLION	TBD

OCEAN SURVEY SHIP - TAGS

Mission:

Ocean Survey Ships are assigned to the Ocean Survey Program in direct support of the Submarine Launched Ballistic Missile (SLBM) Program.

CHARACTERISTICS (Conversion of C3 Hull)

LENGTH:	483 FT	BEAM:	68 FT
SPEED:	18 KTS	DISPLACEMENT:	16,400 Tons
PROPULSION:	12,500 SHP		

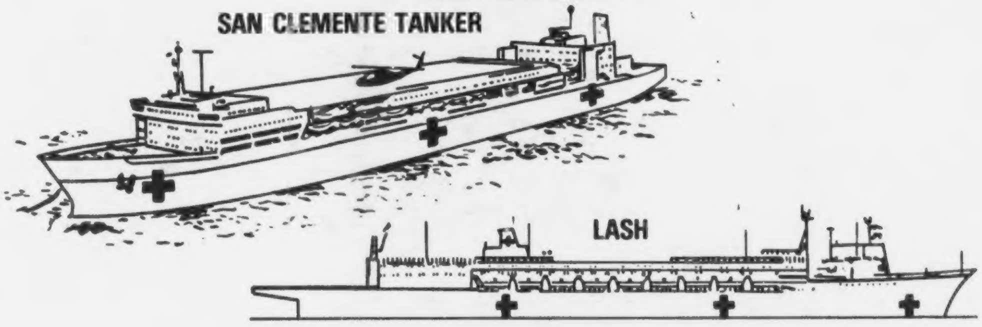
FUNDING REQUEST	COST	BUILDER
FY 1984 PROGRAM:	$34.5 MILLION (Advanced Procurement)	TBD

HOSPITAL SHIP - TAH

Mission:

To provide full medical support on a worldwide basis to the Rapid Deployment Joint Task Force and other U.S. Forces that are engaged in combat operations or are located in areas where hostilities may be imminent.

ALTERNATIVES



CHARACTERISTICS

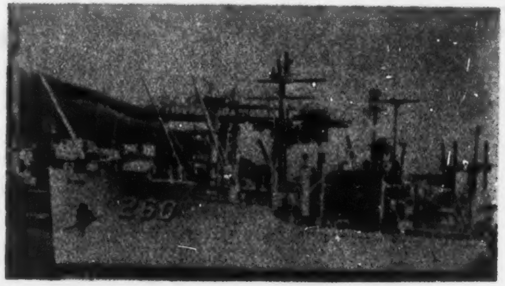
- 1000 beds, 12 operating rooms per ship plus required medical and ship keeping support.
- Ship characteristics depend on winner of competition.

FUNDING REQUEST	NUMBER	COST	CONVERSION YARD
FY 1984 PROGRAM:	1 SHIP	$260.0 MILLION	NATIONAL STEEL OR MARYLAND SHIPBUILDING

MISSILE RESUPPLY SHIP TAK (FBM)

Mission:

Provides Resupply service to Strategic Submarine tenders at Holy Loch Scotland, Charleston, S.C. and Kings Bay, Ga.



CHARACTERISTICS (Conversion of C3 Hull)

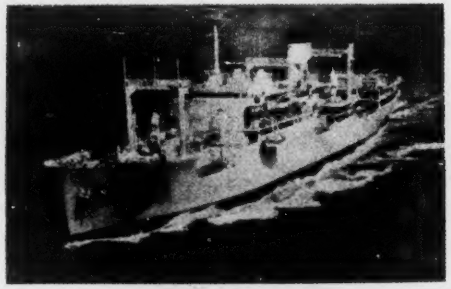
LENGTH:	483 FT	BEAM:	68 FT
SPEED:	18 KTS	DISPLACEMENT:	15,015 Tons
PROPULSION:	12,500 SHP		

FUNDING REQUEST	COST	BUILDER
FY 1984 PROGRAM:	$.9 MILLION (Advanced Procurement)	TBD

COMBAT STORES SHIP - TAFS

Mission:

To operate as a unit of an underway replenishment group and to furnish refrigerated, dry cargo and repair parts to the Fleet.



CHARACTERISTICS

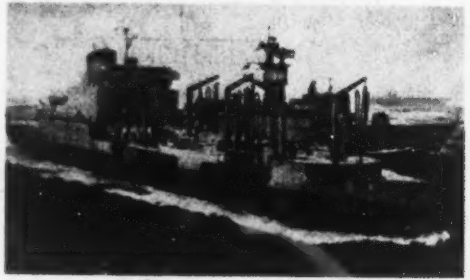
LENGTH:	524 FT	BEAM:	72 FT
NAV DRAFT:	22 FT	DISPLACEMENT (FULL LOAD):	16,792 Tons
PROPULSION:	11,250 BHP	SPEED:	18 KTS

FUNDING REQUEST	NUMBER	COST	BUILDER
FY 1984 PROGRAM:	1 SHIP	$16.1 MILLION (Includes $3.1 million for class spares)	NONE Purchase of existing ship from RFA

FLEET OILER TAO 187

Mission:

To provide rapid replenishment of petroleum products to operating forces at sea.



CHARACTERISTICS

LENGTH:	677.5 FT	BEAM:	97.5 FT
NAV DRAFT:	35.0 FT	CAPACITY:	180,000 Barrels
SPEED:	20 KT Sustained	PROPULSION:	Medium Speed Diesel
SHAFT HORSEPOWER:	32,000		

FUNDING REQUEST	NUMBER	COST	BUILDER
FY 1984 PROGRAM	3 SHIPS	$524.6 MILLION	AVONDALE

FAST LOGISTIC SHIP - TAKR

Mission:

To enhance strategic sealift capability in support of the Rapid Deployment Force (RDF) specifically by moving equipment and supplies of heavy combat units rapidly to the greater Middle East, and providing the capability to move equipment and supplies for rapid reinforcement of NATO.

CHARACTERISTICS

LENGTH: 946 FT
DESIGN DRAFT: 30 FT
PROPULSION: 120,000 SHP
MAX SPEED: 33 KTS

DISPLACEMENT: 51,815 Light Tons
CONTAINERS: 1096 (Prior to conversion)

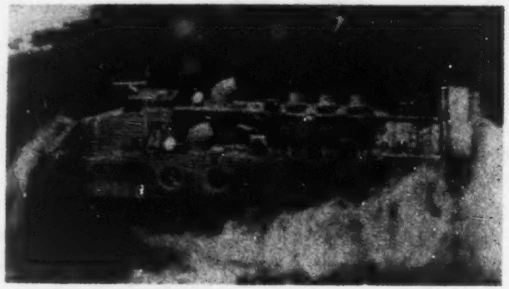
POST CONVERSION: 185,000 SQ FT RO/RO/capacity, Helicopter Flight Deck

FUNDING REQUEST	NUMBER	COST	BUILDERS	82	84
FY 1984 PROGRAM:	4 SHIPS	$246.5 MILLION	NATIONAL STEEL	2	1
			AVONDALE	1	2
			PENN SHIP	1	1

LANDING CRAFT AIR CUSHION - LCAC

Mission:

To transport the assault elements of the Marine Amphibious Task Forces from ship to shore and across the beach.



CHARACTERISTICS

LENGTH:	87 FT 11 IN	DESIGN PAYLOAD:	60 Tons
BEAM:	47 FT	OVERLOAD PAYLOAD:	75 Tons
INSTALLED POWER:	12,444 SHP	SPEED:	40 KTS with payload
CARGO DECK AREA:	1,809 SQ FT	RANGE:	200 NM with payload

FUNDING REQUEST	NUMBER	COST	BUILDER
FY 1984 PROGRAM:	6 CRAFT	$161.1 MILLION	BELL AEROSPACE/TEXTRON

CRAFT

PROGRAM	QUANTITY	FUNDING
LCAC	6	$161.1M
LCM-8	18	$ 15.0M
PB (M)	1	$ 15.0M
YTB	9	$ 43.2M
YP	5	$ 22.5M
YD	5	$ 30.6M
YC	14	$ 8.0M

OTHER SHIPBUILDING

	FY 1984
OUTFITTING	$204.2M
POST DELIVERY	$124.2M
COST GROWTH	$674.7M
ESCALATION	$375.6M
STRATEGIC SEALIFT	$ 31.0M
NET FUNDING REQUIREMENT	$1,409.7M

Ships Maintenance and Modernization Division

STATEMENT OF REAR ADM. JAMES K. NUNNELEY, U.S. NAVY, DIRECTOR, SHIPS MAINTENANCE AND MODERNIZATION DIVISION

PREPARED STATEMENT

Senator **Stevens**. Admiral Nunneley.

Admiral **Nunneley**. The same situation, sir.

[The statement of Admiral Nunneley follows:]

PREPARED STATEMENT OF REAR ADM. J. K. NUNNELEY, USN

DIRECTOR

SHIPS MAINTENANCE AND MODERNIZATION DIVISION

VG 1

Good morning, Mr. Chairman. I am Rear Admiral James K. Nunneley. I serve on the staff of the Chief of Naval Operations as Director of the Ships Maintenance and Modernization Division. I am charged with responsibility for ship maintenance policy, including the development of plans and programs for the accomplishment of repairs and modernization of U. S. Navy ships.

While the subject of today's hearings is entitled "Navy Shipbuilding" and encompasses both SCN and OMN programs, this statement will specifically address the Navy's "Ship Overhaul and Modernization Program". To properly address this program, one needs to understand the ship maintenance strategy of the Navy which includes three levels of maintenance: Namely, organizational level, intermediate level and depot level. I will discuss each of these in this presentation.

VG 2

The Navy's Ship Maintenance and Modernization Program has two basic objectives: first, to maintain an adequate material condition in the fleet and thus provide the maximum number of ships available for operations at sea; second, to modernize existing ships in order to enhance their capability so that they can counter current and projected enemy threats. Ships are also modified for reasons of safety, environment, reliability, and maintainability.

VG 3

The Navy's policy is to maintain the fleet fully capable of meeting the expected threat and to keep our ships in a material condition sufficient to allow them to accomplish their assigned missions. Further, our policy dictates that the required maintenance and modernization work should be performed at the lowest effective level of maintenance throughout the life cycle of the ships.

VG 4

The program which implements this policy is characterized as a balanced approach to maintenance and modernization. It requires a contribution from each of the three levels of maintenance within the Navy. The lowest level is the organizational level consisting of the ship itself and the sailors on board the ship. At this level it is well to remember that on board ship, unlike most other organizations, sailors not only operate the equipment but also have responsibility for a significant amount of maintenance, including both planned and corrective. This is necessary to ensure that emergent repairs can be made by our sailors when ships are operating far from shore support facilities. The aggregate shortage of experienced uniformed personnel in the fleet (i.e., the top five rates, which is projected to be 14,000 petty officers at the end of FY 83) is adversely affecting organizational maintenance and forcing some of it to be transferred to a higher level. The next level is the intermediate maintenance level consisting of our tenders, repair ships and our shore intermediate maintenance activities wherein sailors with specialized skills assist shipboard personnel by accomplishing intermediate level repair work, which is essentially work beyond the capability of the ship's personnel. The intermediate maintenance activities may also absorb organizational level work which is beyond the current capacity of the ship, due to such things as a high tempo of operations or a shortage of shipboard skilled personnel.

The highest level of maintenance is the depot level consisting of Navy and commercial shipyards performing conversion, alteration and repair work on Navy ships. In general, the workload is assigned to these specific levels on the basis of the capabilities at each level and the extent of work required. By a balanced program we mean that throughout the operating cycle of a ship, maintenance tasks are divided among the three levels in order to achieve the highest possible operational availability for the resource investment made.

VG 5

The relative proportion of preventive maintenance, repairs and alterations allotted to the three levels of maintenance is shown here. As previously stated, our basic policy is to accomplish ship maintenance at the lowest practical and effective level. Getting more ships returned to a maintainable baseline condition during the overhaul period is necessary, but is not sufficient. We are dedicated to getting greater contributions and greater output from a balanced maintenance program that will achieve optimum return from all three levels of maintenance.

In accordance with the tasking for this hearing, I will address the depot level programs in some detail and will further review those issues of significance delineated in the FY 1983 Congressional committee reports.

I will begin with the Depot Maintenance and Modernization Program which is clearly our largest program. It is at this level that the most extensive work is accomplished, including the installation of major alterations to the ships.

VG 6 and VG 7

The locations of the sites wherein our depot maintenance is accomplished are delineated in VG 6 and VG 7. VG 6 displays the location of the eight naval (public) shipyards. VG 7 delineates the geographic distribution of the principal commercial yards (about 60) who also support the Navy's Depot Maintenance Program.

VG 8

Depot level maintenance can be grouped into two basic categories; planned maintenance and unplanned maintenance. Planned maintenance is scheduled well in advance and takes into account the ships operating schedule. Unplanned maintenance is assigned when a ship requires repairs for an unforeseen breakdown.

Planned maintenance is subdivided into two categories; regular overhauls (ROH's) and selected restricted availabilities (SRA's). A regular overhaul, as the words imply, is a period assigned to accomplish general repairs to a ship's systems and equipments at a naval shipyard or a private shipyard. Regular overhauls are scheduled for planned durations at specific intervals during a ship's lifetime.

Unplanned maintenance consists of restricted availabilities (RAV's) and technical availabilities (TAV's). Restricted availabilities are assigned for specific repairs which require the ship to be present in the repair activity. Hence, the ship is rendered incapable of fully performing its assigned mission. Technical availabilities are assigned for specific repairs when the presence of the ship is not required. In this case, a piece of equipment may be removed from the ship for repair in the shipyard. However, the ship is capable of continuing to perform its assigned mission.

VG 9

It is essential that the operational availability of the Navy's limited ship assets be maximized. This next slide illustrates one of the techniques we are using to accomplish this: the use of an engineered operating cycle. Under a conventional cycle a ship would operate for a period of time after an overhaul, shown here as 37 months, before entering a shipyard for the next overhaul. In an engineered cycle the period between overhauls is extended, to 60 months for a typical destroyer as shown here. To ensure that adequate material condition is maintained over the longer period, selected restricted availabilities of about two months duration, depending on ship class, are scheduled for planned, non-deployed periods. These new, longer cycles are increasing the time over which the ships can be operated without interruption.

VG 10

The parameters of engineered operating cycles can vary significantly depending on the ship type involved and its normal operational scenario. The first ships to enter an EOC were the ballistic missile submarines in the early 1970's. The programs for these ships resulted in an operational cycle of 6 to 9 years with planned availabilities of a nominal 60-day duration every 24 months until the next overhaul. For some of these ships the interval between overhauls has been extended to twelve years.

The next ships to enter an EOC program were attack submarines. Their program extended the interval between overhauls from 43 to 70 months for those ships included. Within this 70-month operating cycle, these ships are scheduled for a 60-day depot availability every 22 months. We have since extended the operating cycle for the newer attack submarines to 84 months.

The FFG 7 Class ships presently entering the fleet have been designed for reduced crews and limited ship's force maintenance capacity. As a result, these ships will undergo a progressive overhaul during a series of short depot level availabilities at two-year intervals which emphasize equipment changeout vice conventional repair-in-place methods. Under this concept the ship and its equipment will be undergoing incremental overhaul at any given point in the ship's maintenance cycle. Major modernization periods are scheduled for this ship class at approximately ten-year intervals.

Another variant of the EOC concept is the phased maintenance program being applied to both Atlantic and Pacific Fleet combat stores ships. For example, there are only three of these ships in the Atlantic Fleet and there is a requirement to maintain one ship on station in the Mediterranean at all times. When one of the ships is in overhaul the two remaining ships would be required to make back-to-back deployments. To alleviate this problem, these ships have been placed in a program which features a five-year operating cycle with a four-month docking selected restricted availability at the end of that period. Three, 2 to 3 month depot availabilities are also scheduled during the normal at-home periods following deployments. The program is expanding with plans to implement phased maintenance on additional classes of ships including the AO 177, AOR 1, LST 1179, AE 21/26 and AOE 1. Because of the potential payoff of this program in assisting the operational commander to more efficiently integrate commitments in the Indian Ocean, we have extended the concept to the four Pacific Fleet combat stores ships. Plans are also underway to implement the program on the seven replenishment oilers beginning in fiscal year 1984.

VG 11

We have expanded EOC concepts to other existing ship classes, most notably the amphibious and auxiliary ship types. For new ships, such as the CG 47 and the LSD 41 Classes, the engineering necessary to support an EOC program is being accomplished during construction. We have made significant progress in developing and introducing EOC programs. By the end of fiscal year 1985, about one-half of the fleet, will have entered engineered operating cycle programs.

VG 12

Although EOC programs are successful in helping the operational commander obtain maximum availability from his ships, they are not without drawbacks.

Some modernization requirements cannot wait for five to ten years, which is the extended period between major overhauls for most of the EOC ships. Rather, ship alterations must be installed during the short, intra-cycle depot maintenance periods. This may mean installing them incrementally during several availabilities, doing extensive prefabrication, packaging the material and software in such a way as to minimize installation time, or combinations of all these approaches.

For a short availability to be successful, effective material planning and management procedures must be used. All material must be there when the availability starts. Additionally, more contingency material must be available to offset long material lead times for some components.

Engineering must be completed to ensure that the work packages developed for the short intra-cycle availabilities include and plan for accomplishment of items which could affect the ability of the ship to successfully operate through the longer operational cycle. Drawings and work instructions must be completed when the availability starts. Special procedures for expediting decisions have been developed and are implemented.

In general, the increased number of short, labor intensive availabilities which must be planned and executed require increased management resources to ensure their success. This is in turn exacerbating an already difficult manning situation in the naval shipyards and in the offices of the Supervisors of Shipbuilding, Conversion and Repair who administer Navy work at private shipyards.

The process of determining our funding requirements begins far in advance of the budget submission and, of course, well in advance of inducting individual ships into the overhaul schedule in the year of execution.

The central point of focus for determining ship overhaul requirements is at the type commander level. Each type commander is staffed with personnel who are assigned responsibility for the material management of specific ship types, for example, frigates, carriers and submarines. Throughout the operating cycle these personnel maintain familiarity with specific problem areas on individual ships under their cognizance. They also stay in close communication with the ship's commanding officer and crew who maintain an automated data base of material discrepancies on systems and equipments to be corrected at each of the three levels of maintenance.

VG 13

For a scheduled overhaul, it is the responsibility of the type commander and the ship's force to develop the repair package. This is accomplished by selecting items requiring accomplishment from the ships maintenance file and by identifying additional work through the use of a series of pre-overhaul tests and inspection. Accomplishment of these tests is coordinated for the type commander by planning activities known as planning and engineering for repairs and alterations (PERA's). Total fleet coverage is provided by five PERA's, each specializing in certain ship types.

Similarly, the modernization package is developed through the coordinated efforts of the type commander staff, the Commander, Naval Sea Systems Command and the Chief of Naval Operations well before the commencement of the overhaul.

Following completion of the pre-overhaul tests, and identification of the modernization package, the PERA assembles and integrates all requirements in a preliminary work package. This coordinated package is provided to the accomplishing naval shipyard or supervisor of shipbuilding who estimates the costs involved in accomplishing the specified work. For modernization items, these estimates are provided to the Naval Sea Systems Command for authorization and funding. The proposed repair package then becomes the subject of a Work

Definition Conference whose membership includes representatives of the type commander, ship, PERA and the repair activity. The results of this conference then form the authorized repair package and the estimated price to accomplish the defined work.

Ship maintenance and modernization funds are provided via the Navy Comptroller to CNO who in turn provides such funds to the fleet commands and to the Chief of Naval Material for ship maintenance and modernization respectively. The fleet command will, for maintenance, and Naval Sea Systems Command will for modernization, fund the planning estimate directly to the industrial activity.

Upon completion of each overhaul, the shipyard prepares a departure report which provides a breakdown of direct labor man-days and costs required for each job order. The departure report provides detailed overhaul data such as man-days, material and associated costs for specific job orders. These data, in turn, are used as the basis for development of future budget requirements.

VG 14

This slide provides an overview of the cost of the Navy's Ship Maintenance and Modernization Program. The data represents FY 84 Congressional Budget Submit control totals. The program for FY 84 shows 49 overhauls including two aircraft carriers, three fleet ballistic submarines, five nuclear attack submarines, twenty-four surface combatants, nine amphibious, and six auxiliaries.

The total number of overhauls has been decreasing: 67 in FY 81, 63 in FY 82, 61 in FY 83 and 49 in FY 84. The dollar value of the program is more a function of the ship mix than the absolute number of overhauls. Further, other factors are changing the distribution of funding required. Additional ships have been approved for placement on phased maintenance and extended operating cycles. The net result is a reduction in the number of overhauls, but a corresponding increase in the number of selected restricted availabilities.

The Chief of Naval Operations has established planning factors for overhaul durations and intervals for each class of ship in the Navy. These planning factors are key elements in building long-range schedules for overhauls and selected restricted availabilities that dovetail with the fleet operating schedules and project the workload for the industrial activities. They are based upon technical information, engineering analysis, operating experience and modernization requirements for each class. Planning factors are regularly analyzed from operational, material and design standpoints to determine when changes are required.

The subject of ship overhaul scheduling is a significant planning factor in the program. In early fall, each year, key Navy participants meet to schedule overhauls and selected restricted availabilities. Participants include personnel from my staff, the Naval Sea Systems Command Headquarters, the fleet commanders and the type commanders, naval shipyards and the supervisors of shipbuilding. Using the planning factors and the ship's long-range operation schedule, a five-year overhaul program is constructed. It is important to note that the maintenance requirements are presented by the ship type commanders, the organization most intimately aware of the individual ship conditions.

Subsequent to the formulation of the overhaul schedule, the Commander, Naval Sea Systems Command, with inputs from the fleets and approval of CNO, determines the distribution of the workload to both public and private yards. The Navy's overhaul assignment policy is structured to ensure a balance among three essential ingredients: morale and well being of crews, maintenance of an adequate, dispersed industrial base and enough competition to get a good job at a reasonable price. It has always been impossible to overhaul all ships in their homeport areas. Many of the public and private shipyards are not located within major homeport areas. The floor of restricting one-third of the overhauls to homeport, providing adequate competition exists, is consistent with historic actual experience. Homeport shipyards can exceed this floor through competition, which should be perceived as both fair and consistent with the Navy overhaul policy, while placing proper emphasis on sustaining the private shipyard industrial base. It should be noted that the depot workload includes selected restricted availabilities (SRA's) as well as overhauls. The number of SRA's is increasing as more ships are placed on engineered operating cycles. SRA's are normally accomplished in homeport.

The Navy has historically assigned its more complex warships to naval shipyards, where specialized facilities and skills are maintained. The proportion of complex warships in the fleet has been increasing since the mid-seventies, and it is clear that more complex ships will go to private shipyards for overhaul. The Navy recognizes that positive action is required for shipyards to develop the necessary experience, skills, and facilities to perform complex ship overhauls on a routine basis. In order to accommodate the additional complex warships in the private sector, the Appropriations Conference Committee has directed the Navy to initiate procedures to certify those private shipyards holding commercial master ship repair licenses and establish a procedure to qualify firms to act as master ordnance repair facilities. The Navy has been working on MSR certification procedures for some time and has found that legal, contractual and small business factors make it difficult to implement such a major policy change rapidly.

We also recognize that the SUPSHIP organization, which is responsible for the administration of shipwork contracts assigned to private yards, must be strengthened, both in numbers and quality. There is expected to be a heavier involvement of the SUPSHIP organization in the determination of repair work, preparations of specifications and contract administration of complex overhauls which will place a heavier demand on supervisor personnel.

In April 1981, we conducted our first annual private sector overhaul planning conference to develop a comprehensive plan for future private overhauls. Subsequent conferences have been convened in March 1982 and February 1983. The object of this initiative is to assist the private sector in its long-term planning. As a result of these conferences a planning matrix (i.e., the private sector depot level planning report) has been developed. This matrix identifies for the current and following years: workload, type of contract, solicitation area, and anticipated contract award date. This matrix has proved most benefical in that it has imparted to the private sector workload information for planning.

Notwithstanding the above initiatives taken by the Navy to assist the nation's private shipbuilding and ship repair industry, it must be noted that this industry worldwide has suffered during the international economic depression. In the United States in particular, the private sector has been impacted adversely because of a steady decline in commercial ship new construction and repair, primarily due to the deterioration of the U. S. Merchant Marine. This situation is of serious concern to us, yet we know, that Navy work has been and will be insufficient to support adequate shipyard industrial base capabilities required to meet mobilization requirements.

The problem is further compounded by two factors. First, the FY 84 Ship Maintenance and Modernization Program submitted to the Congress is exceptionally small, largely because of early retirement of the DD 931 Class destroyers and the recent extension of operating cycles for five additional surface combatant ship classes. Second, the House Armed Services Committee Report of 11 May 1983 recommends a reduction of $131M, the equivalent of 4-6 overhaul deletions from FY 84 in which they are now scheduled.

Recently, witnesses representing private shipyard organizations have appeared before various Congressional committees alleging that the Navy is placing an inordinate amount of work in the public shipyards at the expense of private industry. I assure this Committee that this is not the case. Our policy for assigning work to the public and private sectors has been applied consistently taking into account the complexity of the ships in a given year and the capability within the two sectors. The mix between complex and non-complex ships varies appreciably from year-to-year, which has a significant impact on the distribution of repair and alteration work. For example, in FY 84 there are a total of 15 amphibious/auxiliary ship overhauls, whereas in FY 85 there are 26. Since most all of these non-complex ships are overhauled in the private sector there is a substantial difference between the projected percentages for FY 84 and FY 85.

As required by language in the House Armed Services Committee Report of May 11, 1983, the Navy is evaluating the 70/30 distribution of repair work between public and private yards which has been in effect since 1975 and, in the Navy's judgement has served the best interests of the nation effectively. I would remind the Committee that the current system provides adequate flexibility to accommodate the differences in work mix from year-to-year. The percentage of repair and alteration work assigned to private yards has varied between 33.9 and 38.7% over the past four years, averaging 35%. This does not include a significant amount of work which is subcontracted to private industry by naval shipyards.

Regardless of the results of the Navy study, some private shipyards will suffer decreasing workloads and be impacted adversely. Some private shipyards will unfortunately close. The end result will be a reduction in the nation's industrial base, and in turn, a resultant impact on our mobilization potential if measures are not taken to improve maritime industry economic health.

VG 15

Very briefly I will address maintenance carry over or backlog. A ship is generally designated as an overhaul backlog ship when its overhaul is delayed from the fiscal year in which the established overhaul cycle dictates. Although we had a high backlog in FY 76, amounting to 68 ships, we have decreased the backlog to 16 in FY 82 and to 13 in FY 83. We project 13 in FY 84. We are targeting zero backlog in FY 85. With respect to the backlog in FY 83 and FY 84, two overhauls in each of these years are due to lack of funds. Specifically, the $100M reduction imposed by the Congress on the Navy's Depot Maintenance Programs, $50M of which was absorbed by ships, resulted in the deferral of two scheduled regular overhauls in FY 83. Deferral of these overhauls into FY 84 caused us to defer two other scheduled FY 84 overhauls into FY 85. The previously mentioned reduction of $131M as recommended by the House Armed Services Committee would certainly add to the number of deferrals in FY 84 and could well create a domino effect in future years, thus reversing the tremendous strides that have been made in backlog reductions over the past five to ten years. Deferring scheduled and needed maintenance degrades ship readiness. As you review the executability of the FY 84 Ship Overhaul Program, I would ask you to take into account improvements reflected in FY 82 program performance and thus far in FY 83 which stem from changes instituted in Sep 1981. Groundwork for the FY 84 Budget was laid at that time using a broadened group of participants including fleet, type commander, NAVSEA, shipyards, SUPSHIP's and CNO representatives. I am confident that these and other changes in our budget development procedures, coupled with a number of specific actions taken under the Depot Operations Improvement Program, has greatly improved the stability of our ships' program and the efficiency of depot operations. To date, our quarterly reports regarding actual inductions and obligations as required by last year's Senate Appropriations Committee Report attest to the efficiency of the FY 83 program. I assure you that the FY 84 program is executable, and that any reduction to what is already a small overhaul program would adversely affect our industrial base and our readiness posture.

Eleven ships in the overhaul backlog in FY 83 and FY 84 are due to operational constraints. We have too few ships to carry out national commitments and those we have are stretched thin. The net result is that some ships must be delayed in entering overhaul. A small number of ships in the overhaul backlog due to operational constraints is manageable, and is not considered to be a major maintenance problem.

One of the issues raised by Congress concerns civilian personnel end strength ceilings. For a number of years, the House Appropriations Committee has included report language criticizing the practice of placing civilian personnel ceilings on DoD. The FY 1983 Defense Authorization Act assigns the Department of Defense a civilian personnel end-strength ceiling on total direct and indirect hire employment; however, Section 788 of the FY 1983 Defense Appropriations Act prohibits use of funds to implement a civilian personnel ceiling on DoD industrial fund personnel, and provides that any increase in industrial fund civilians in FY 1983 above the 30 September 1982 actual will not be counted against any statutory or administrative ceiling.

Section 788 does not eliminate the Authorization Act ceiling, but has the effect of making the ceiling open-ended to allow for any FY 1983 growth in industrially funded activities.

Section 788 provides flexibility to adjust industrial fund employment levels to accommodate workload changes in budget execution, and will allow us to achieve a more efficient balance of full-time permanent and temporary personnel for the remainder of FY 1983 and into FY 1984.

The Navy position is that civilian manpower levels should be determined by the level of funded workload reviewed and approved by OSD, OMB and Congress. Integrated review of manpower and funded workload within Navy assures adequate control of staffing levels.

Section 788 represents a one-year experiment, which is an inadequate period to effectively evaluate the results. I feel that in order to obtain meaningful results in our naval shipyards, a period covering 3 fiscal years is required.

To this point I have concentrated on ship maintenance, however, the initiatives discussed not only apply to Navy maintenance efforts but also to its companion program of fleet modernization.

The Fleet Modernization Program, FMP as it is called, is the Navy's program to improve mission capabilities of existing ships to counter both current and projected enemey threats. The modernization program also installs alterations related to safety, habitability, reliability and maintainability plus pollution abatement.

The FMP has been highly successful in meeting its objectives of upgrading the fleet's military capabilities and overall readiness. A measure of this success is the fact that approximately 2,500 alterations are being installed annually and that the number of alterations accomplished closely approximates the number originally programmed.

An example of ongoing modernization efforts in fiscal year 83 is the major upgrade of combat systems in cruiser and destroyer class ships. This upgrade includes installation of new detection radars, modifications to tactical data systems and greatly improved engagement capabilities with installation of TOMAHAWK, HARPOON and advanced standard missiles. Similar type mission upgrades plus readiness improvements are being accomplished aboard other type fleet units.

In order to improve effectiveness, this complex program is constantly being monitored to identify weaknesses and initiate corrective actions. Current improvement efforts are focused on reducing the number of alterations which must be deferred by improving the technical quality of ship alterations and improving material management. Actions being taken include:

- Initiation of fleet verification conferences to review status of ship alteration packages 13-15 months prior to start of overhauls.

- Improving timeliness and quality of technical guidance provided to installing activities plus closely monitoring the alteration development process.

- Improving alteration cost estimates by insuring that return cost information is available.

- Improving alteration material management by emphasizing proper ordering procedures and improving tracking programs and to provide greater visibility of material plus improved integration of procurement and installation process. Although some of these actions have only recently been initiated, there has already been a dramatic improvement in reducing the number of deferrals associated with design and material deficiencies.

In summary, the flexitility and effectiveness of the FMP is aptly demonstrated by its ability to respond rapidly to changing requirements and, the fact that we are able to upgrade our ships to meet the changing threat of our potential adversaries.

In order to ensure the continued effective execution of the Ship Maintenance and Modernization Program, it is necessary that the shipyard plants and facilities be upgraded and modernized to take advantage of changing industrial technological improvements and to support new fleet systems. This is accomplished through the Shipyard Modernization Program. This program began in the early 1970's and is a capital investment program designed to replace or improve old and obsolescent facilities and equipment to:

a. Correct urgent deficiencies in the naval shipyard's capability to support U. S. Navy ships.

b. Provide the naval shipyards with new capabilities to support new ship classes.

c. Improve naval shipyard efficiency and productivity.

d. Enhance naval shipyard capability to meet mobilization requirements.

The House Appropriations Committee Report for FY 83 addresses a new initiative referred to as the Asset Capitalization Program (ACP). The FY 83 budget permits industrial fund activities to purchase equipment with funds to be collected from their customers for equipment depreciation. The Navy has, in fact, implemented this initiative with respect to industrial plant equipment in naval shipyards. Beginning in FY 1983 we commenced to pass on to the customer the cost of acquiring new industrial plant equipment through the naval industrial fund rather than by use of appropriated funds, as in the past. (Heretofore, the program has been funded from three appropriations: MILCON for facilities; OPN for plant equipments; and O&M,N for expense items and equipment installation and relocation). The budget targets for industrial plant equipment acquisition in fiscal year 1984 and the following years are approximately 5-percent of estimated gross annual shipyard revenues, although the fiscal year 1983 budget did fall substantially below this target. The 5-percent annual equipment investment figure is a generally recognized and accepted criterion in private industry. This level of investment will provide reasonable plant equipment modernization and enable the Navy to benefit from new manufacturing technologies and processes. The funding of military construction at naval shipyards through a separate appropriation should be continued since such expenditures are significant in nature and should, appropriately, be identified and authorized by the Congress in a separate appropriation.

VG 17

In summary, I have attempted to describe to you in brief fashion a large and complex program. Its success is vital to the fleet's readiness. Adequate readiness, in turn, can insure successful accomplishment of our mission. The Congress has been instrumental in the strides made during the past few years to improve ship maintenance and modernization. We need the continued support of Congress particularly with respect to:

a. Ship maintenance and modernization funding.

b. Continued authority to match civilian personnel numbers in naval shipyards with the assigned workload as provided in FY 83.

c. Naval shipyard modernization.

Mr. Chairman, this concludes my prepared statement. I will respond to your questions at this time.

REAR ADMIRAL JAMES K. NUNNELEY, USN

Rear Admiral James Kenneth Nunneley was born in Tulsa, Oklahoma, and attended public schools there. He was graduated from the U. S. Naval Academy "with distinction" on 6 June 1952. Following graduation he joined USS TACONIC (AGC 17), an amphibious command ship, as Damage Control Assistant and Repair Division Officer, serving until June, 1954, when he reported to the Massachusetts Institute of Technology for duty under instruction in Naval Construction and Engineering.

He was graduated from MIT in June, 1957, with the professional degree of Naval Engineer and a Master of Science degree in Naval Architecture and Marine Engineering. He was simultaneously designated an Engineering Duty Officer. He was elected to Tau Beta Pi and Sigma Xi, honorary engineering and research societies, respectively. In July, 1957, he reported to Norfolk Naval Shipyard, Portsmouth, Virginia, where he served as Ship Superintendent and as Docking Officer until 1959.

He next reported to the cruiser USS NORTHAMPTON (CLC 1) as Main Propulsion Assistant, and subsequently became Engineer Officer of the ship. Detached in August, 1962, he reported to the staff of Commander, Cruiser-Destroyer Force, U. S. Atlantic Fleet, as Hull and Trials Officer. He next attended the Command and Staff Course at the Naval War College, Newport, Rhode Island. While there, he participated in the George Washington University cooperative program and earned a Master's degree in International Affairs.

From the Naval War College, he was ordered to the Bureau of Ships where he served in the office of Military Personnel. In August, 1967, he reported to the Naval Ship Engineering Center, serving first as Head Engineering Services Office, and later as Ship Design Manager for the nuclear powered frigate, USS VIRGINIA (CGN 38).

In May, 1971, he became Executive Assistant to the Commander, Naval Ship Systems Command. Detached in August, 1972, he reported to Norfolk Naval Shipyard as Repair Officer and later served as Planning Officer until reporting to the Puget Sound Naval Shipyard as Shipyard Commander in June, 1976. He was the Navy attendee at the Spring 1975 Sloan Program for Senior Executives, Sloan School of Management, Massachusetts Institute of Technology. In February, 1979, he was selected to the rank of Rear Admiral.

Rear Admiral Nunneley assumed his present position as Director, Ships Maintenance and Modernization Division, Office of the Chief of Naval Operations on 1 September 1980, following a tour of duty as Deputy Commander for Industrial and Facility Management, Naval Sea Systems Command.

Rear Admiral Nunneley is married to the former Kathryn Kilpatrick of Havertown, Pennsylvania. They have three married daughters.

NAVY SHIP MAINTENANCE AND MODERNIZATION PROGRAM

OBJECTIVES

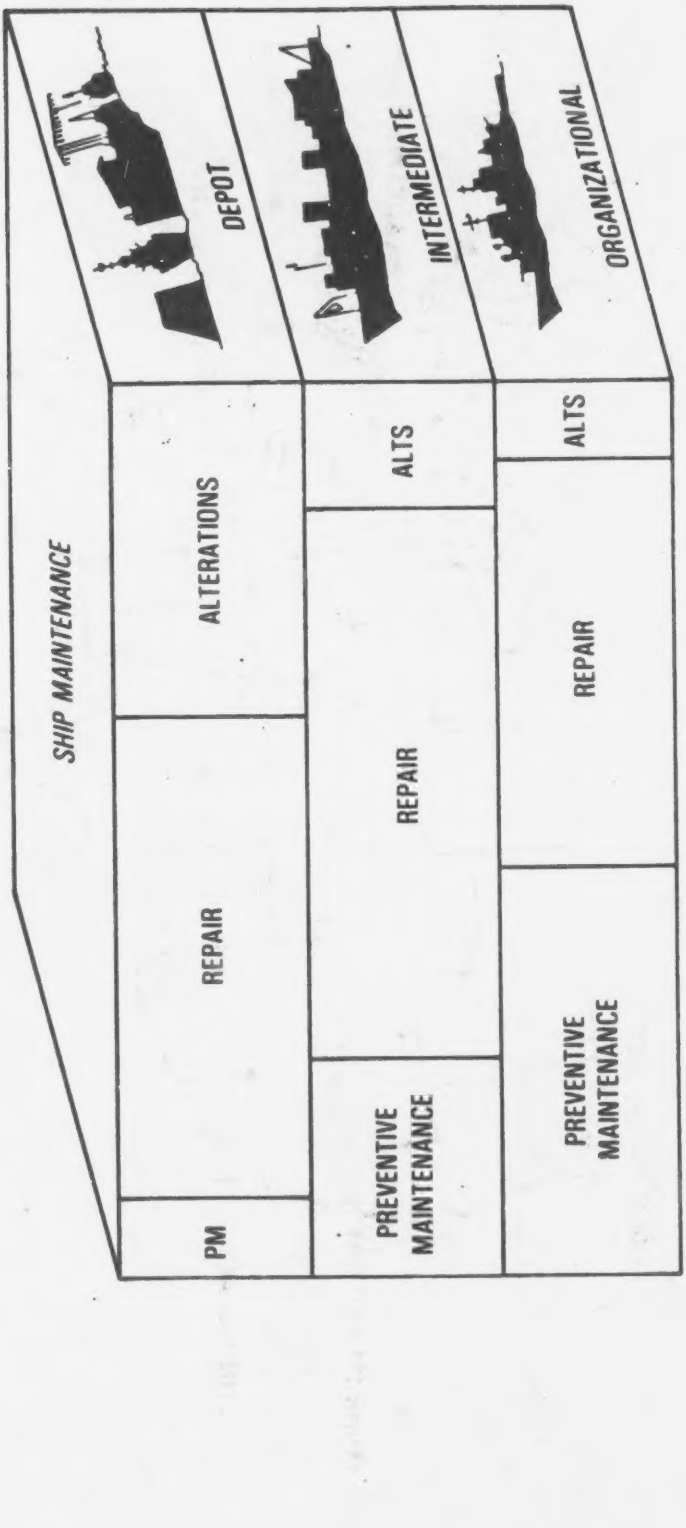
- MAINTAIN ADEQUATE MATERIAL CONDITION OF FLEET IN ORDER TO PROVIDE MAXIMUM AVAILABILITY OF FORCES.
- ENHANCE FLEET CAPABILITIES TO COUNTER CHANGING ENEMY THREATS.

SHIP MAINTENANCE AND MODERNIZATION POLICY

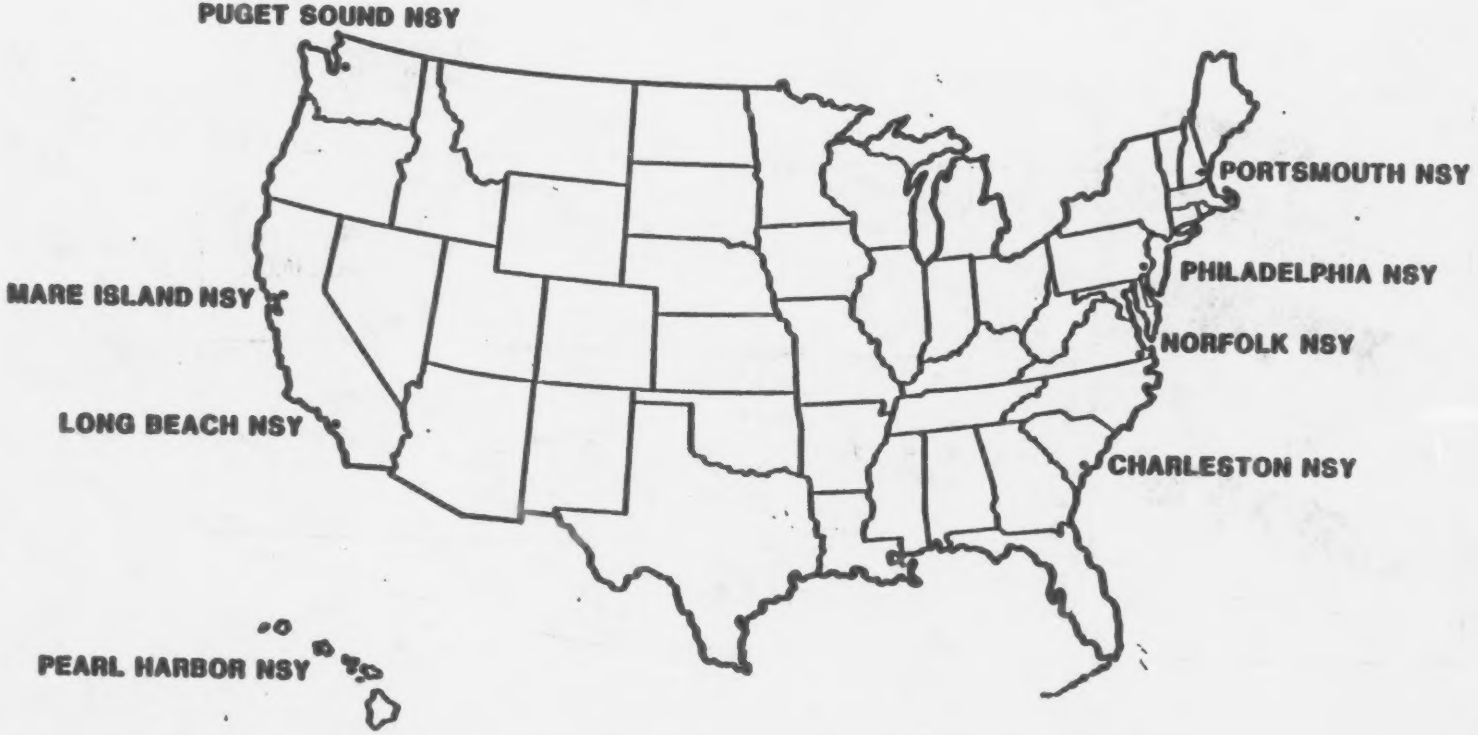
- MAINTAIN SHIPS TO FULL CAPABILITY AND IN GOOD MATERIAL CONDITION.
- ACCOMPLISH SHIP WORK AT LOWEST EFFECTIVE LEVEL.

SHIP MAINTENANCE EQUATION

SHIP MAINTENANCE =	ORGANIZATIONAL LEVEL +	INTERMEDIATE LEVEL +	DEPOT LEVEL
	SHIP	● TENDERS ● SHORE BASED IMAS	SHIPYARDS
	SAILORS	SAILORS	CIVILIANS

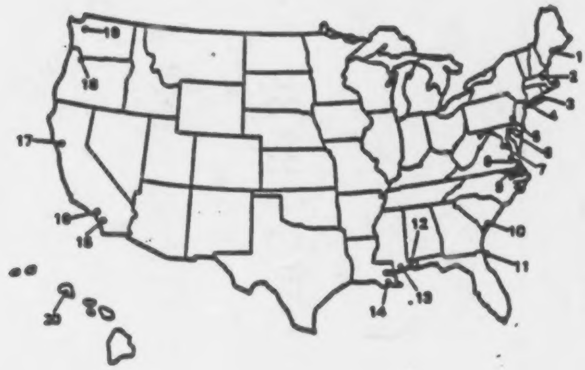

SHIP MAINTENANCE
DEPOT
INTERMEDIATE
ORGANIZATIONAL
PM
REPAIR
ALTERATIONS
PREVENTIVE MAINTENANCE
REPAIR
ALTS
PREVENTIVE MAINTENANCE
REPAIR
ALTS

PUBLIC SHIPYARDS



PUGET SOUND NSY
MARE ISLAND NSY
LONG BEACH NSY
PEARL HARBOR NSY
PORTSMOUTH NSY
PHILADELPHIA NSY
NORFOLK NSY
CHARLESTON NSY

SHIP REPAIR INDUSTRY IN THE UNITED STATES



1. *BATH IRON WORKS

2. *BETHLEHEM STEEL - BOSTON
   *[illegible] DRYDOCK
   *GENERAL SHIP AND ENGINE WORKS - BOSTON
   *NEWPORT SHIPBUILDING - NEWPORT, RI
   *SOUTH PORTLAND

3. GENERAL DYNAMICS - ELECTRIC BOAT

4. *BETHLEHEM STEEL - HOBOKEN
   *COASTAL DRYDOCK
   TODD - BROOKLYN
   *JACKSON ENGINEERING
   *PERTH-AMBOY DRYDOCKS

5. *PENN SHIP-(formerly SUN SHIPBUILDING AND DRY DOCKS)

6. BETHLEHEM STEEL - SPARROWS POINT

7. *MARYLAND SHIPBUILDING AND DRY DOCKS
   *BETHLEHEM STEEL - KEY HIGHWAY

8. *NEWPORT NEWS SHIPBUILDING AND DRY DOCKS
   *HORNE BROTHERS

*CONDUCTED AN OVERHAUL IN THE PAST TWO YEARS.

9. *NORFOLK SHIPBUILDING AND DRY DOCKS
   *METRO MACHINE
   JONATHAN CORPORATION

10. *DETYENS MARINE
   SANDBLASTERS, INC.
   BRASWELL MT. PLEASANT
   *METAL TRADES

11. JACKSONVILLE SHIP
   *ATLANTIC DRY DOCKS
   TAMPA SHIPBUILDING AND DRY DOCKS
   *BELLINGER SHIP

12. *ALABAMA SHIPBUILDING AND DRY DOCKS

13. *INGALLS/LITTON

14. *AVONDALE SHIPYARDS
   BOLAND MARINE

15. *NASSCO
   *TRIPLE A - SOUTH
   ARCWELL CORP.
   ATKINSON MARINE
   *SOUTHWEST MARINE

16. *TODD - LOS ANGELES
   *AL LARSON
   WILMINGTON MARINE

17. *BETHLEHEM STEEL - SAN FRANCISCO
   *TRIPLE A
   SAN FRANCISCO WELDING
   SOUTHWEST MARINE
   *SERVICE ENGINEERING
   *TODD - ALAMEDA
   *MERRITT

18. *NORTHWEST MARINE
   DILLINGHAM

19. *LOCKHEED SHIPBUILDING
   *TODD - SEATTLE
   *LAKE UNION DRY DOCKS
   TACOMA BOAT
   MARINE POWER & EQUIPMENT
   *SEATAC

20. *DILLINGHAM
   *PACIFIC MARINE

DEPOT LEVEL MAINTENANCE

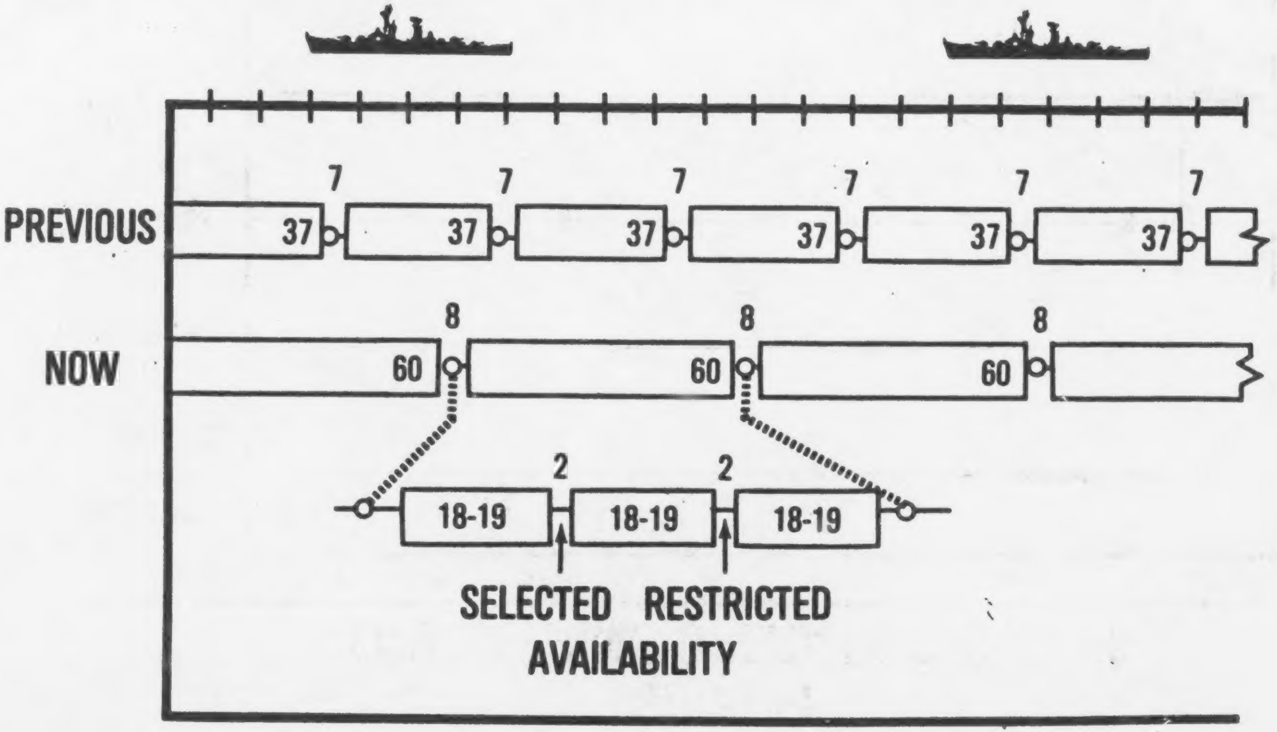
PLANNED MAINTENANCE

- REGULAR OVERHAULS (ROH'S)
- SELECTED RESTRICTED AVAILABILITIES (SRA'S)

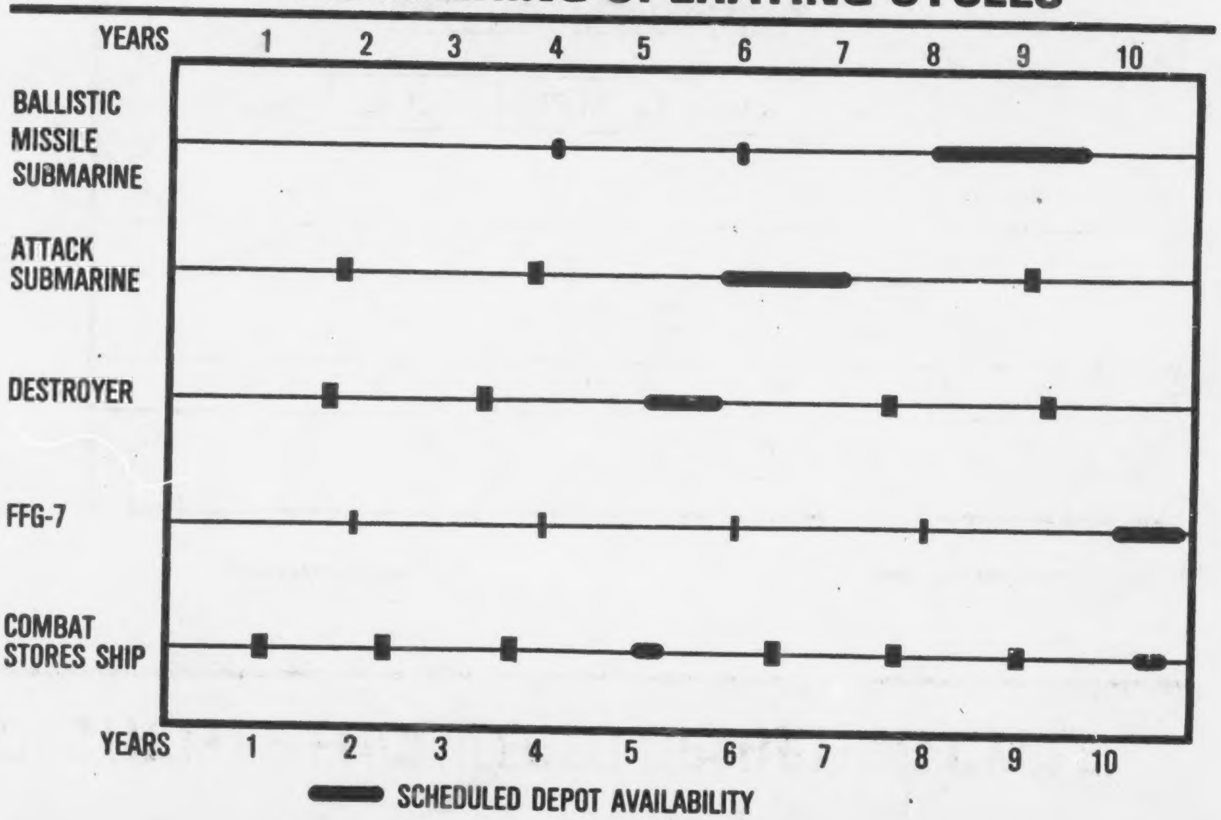
UNPLANNED MAINTENANCE

- RESTRICTED AVAILABILITIES (RAV'S)
- TECHNICAL AVAILABILITIES (TAV'S)

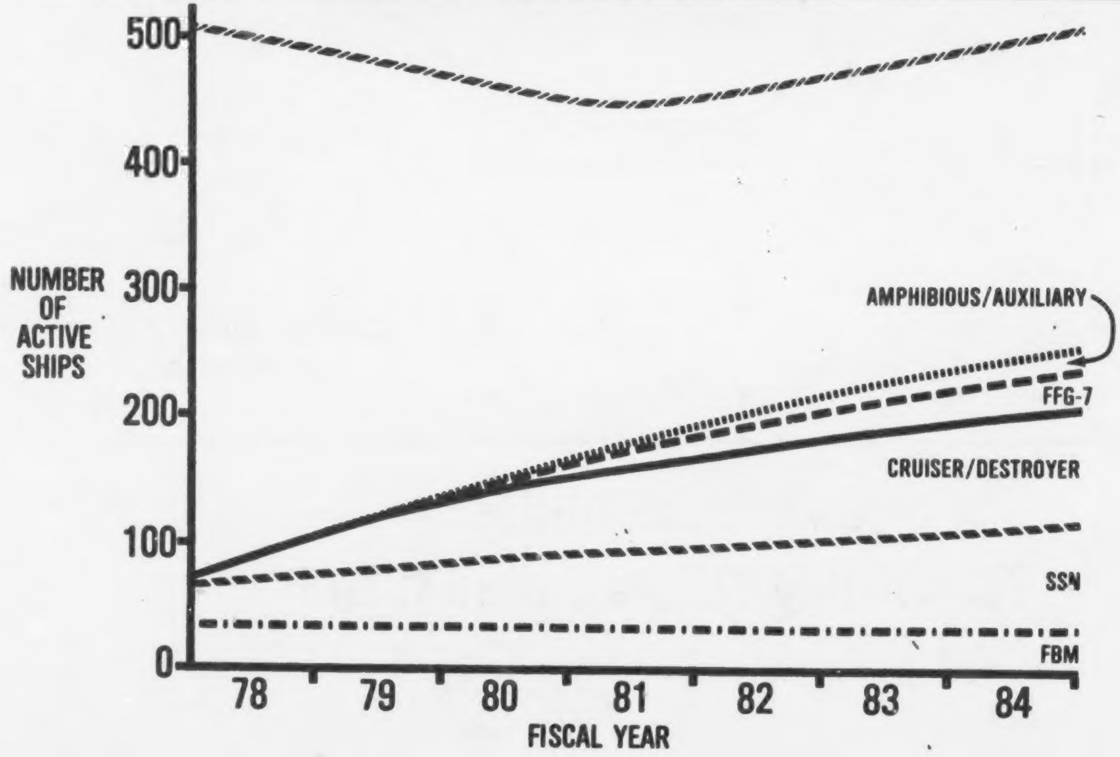
DESTROYER ENGINEERED OPERATING CYCLE


7
7
7
7
7
7
PREVIOUS
37
37
37
37
37
37
8
8
8
NOW
60
60
60
2
2
18-19
18-19
18-19
SELECTED RESTRICTED
AVAILABILITY

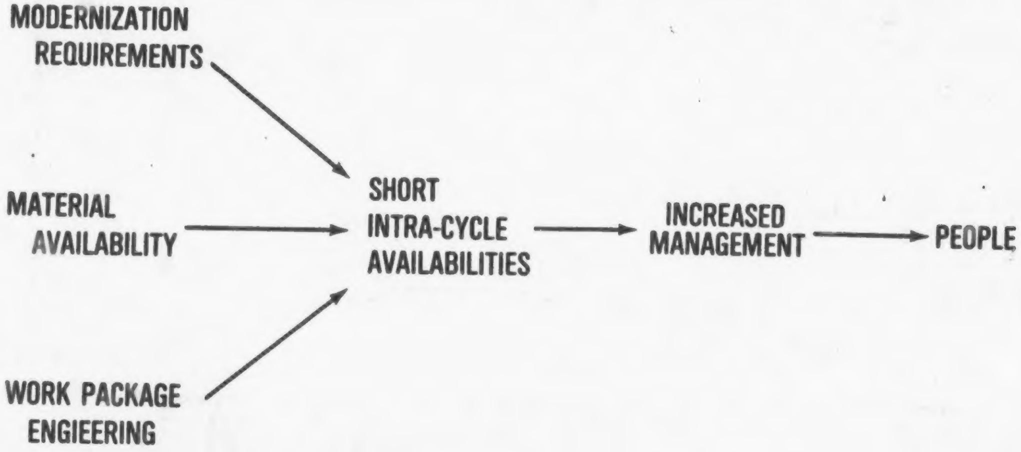
SAMPLE
ENGINEERING OPERATING CYCLES



ENGINEERED OPERATING CYCLE IMPLEMENTATION



ENGINEERED OPERATING CYCLE PROBLEM AREAS



MODERNIZATION REQUIREMENTS

MATERIAL AVAILABILITY

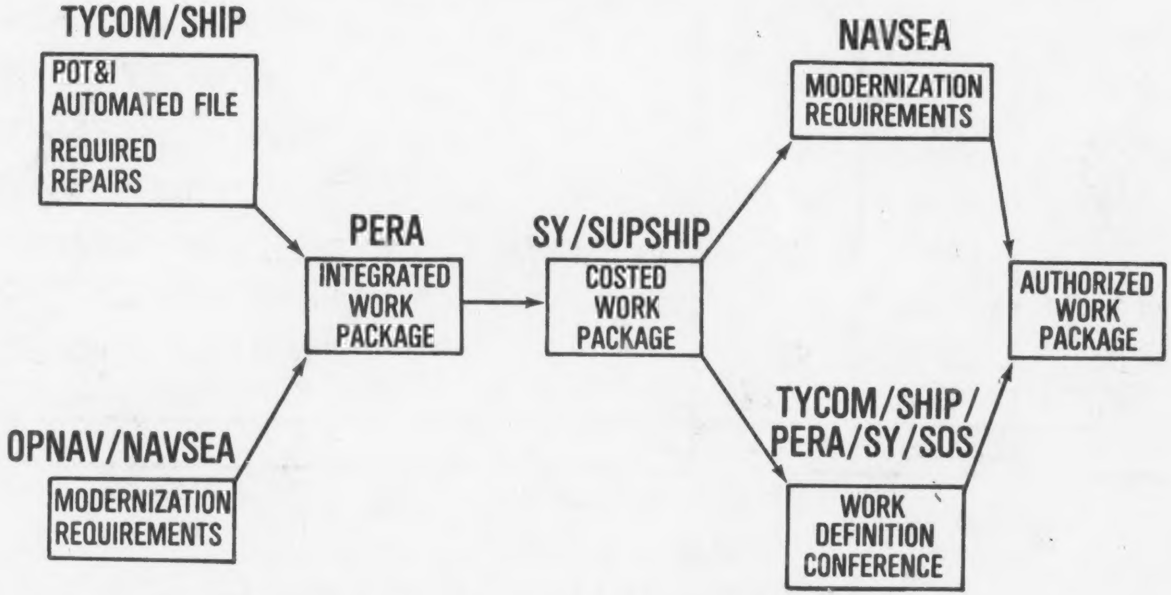
WORK PACKAGE ENGIEERING

SHORT INTRA-CYCLE AVAILABILITIES

INCREASED MANAGEMENT

PEOPLE

OVERHAUL WORK PACKAGE DEFINITION/AUTHORIZATION



TYCOM/SHIP

POT&I
AUTOMATED FILE
REQUIRED
REPAIRS

OPNAV/NAVSEA

MODERNIZATION
REQUIREMENTS

PERA

INTEGRATED
WORK
PACKAGE

SY/SUPSHIP

COSTED
WORK
PACKAGE

NAVSEA

MODERNIZATION
REQUIREMENTS

TYCOM/SHIP/
PERA/SY/SOS

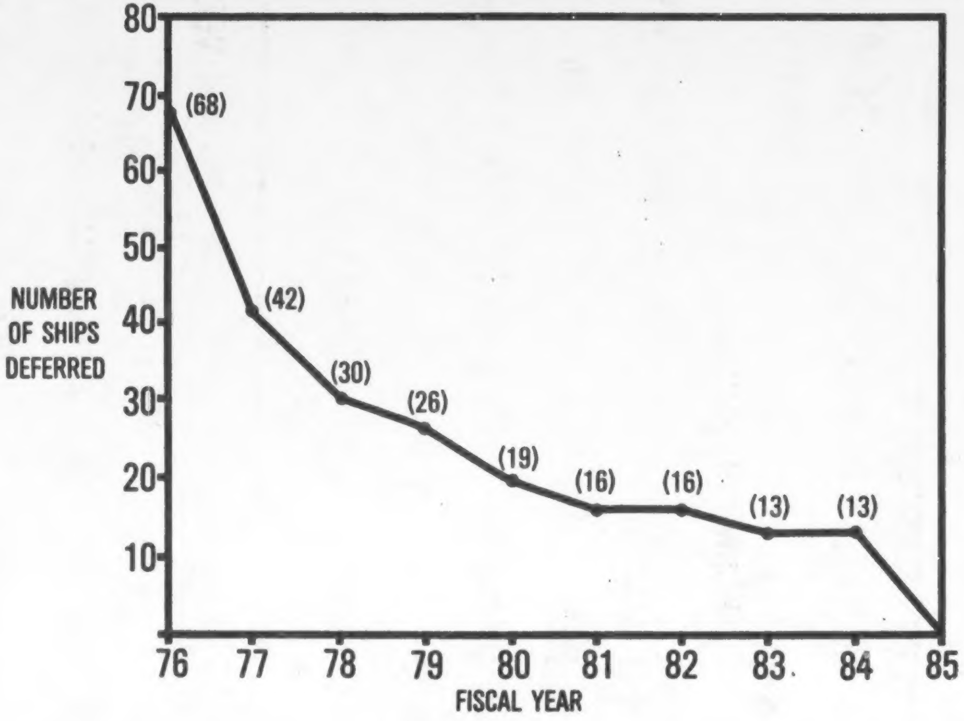
WORK
DEFINITION
CONFERENCE

AUTHORIZED
WORK
PACKAGE

FY 1984 CONGRESSIONAL BUDGET
CONTROL TOTALS
(DOLLARS IN MILLIONS)

	FY 1982	FY 1983	FY 1984
SCHEDULED OVERHAULS	$2,156.5	$2,549.3	$2,357.2
NUMBER OF OVERHAULS	63	61	49
RESTRICTED AVAILABILITIES	815.1	894.5	1,062.8
NUMBER OF SELECTED RESTRICTED AVAILABILITIES	57	80	102
SHIP ALTERATIONS	932.8	876.6	1.052.6
INTERMEDIATE MAINTENANCE	246.0	285.3	321.6
TECHNICAL SUPPORT	100.8	122.0	120.5
ORGANIZATIONAL MAINTENANCE	432.7	561.1	659.0
FLEET OUTFITTING	161.3	203.3	239.8
INACTIVATIONS	10.1	33.6	43.7
BERTHING/MESSING		40.4	34.6
TOTAL	$4,855.3	$5,566.1	$5,891.8

BACKLOG OF DEFERRED OVERHAULS
ACTIVE FLEET



ACTIONS TO IMPROVE FLEET MODERNIZATION PROGRAM

- INITIATION OF FLEET VERIFICATION CONFERENCES
- IMPROVING TIMELINESS AND QUALITY OF TECHNICAL GUIDANCE
- CLOSE MONITORING OF ALTERATION DEVELOPMENT
- IMPROVING ALTERATION COST ESTIMATES
- IMPROVING ALTERATION MATERIAL MANAGEMENT

SUMMARY

CONTINUED SUPPORT OF CONGRESS NECESSARY WITH RESPECT TO:

- SHIP MAINTENANCE AND MODERNIZATION FUNDING
- CONTINUED AUTHORITY TO MATCH NAVAL SHIPYARD CIVILIAN PERSONNEL NUMBERS WITH ASSIGNED WORKLOAD, AS PROVIDED IN FY 1983.
- NAVAL SHIPYARD MODERNIZATION

NAVAL SEA SYSTEMS COMMAND

STATEMENT OF VICE ADM. EARL B. FOWLER, U.S. NAVY, COMMANDER, NAVAL SEA SYSTEMS COMMAND HEADQUARTERS

PREPARED STATEMENT

Senator STEVENS. Admiral Fowler.

Admiral FOWLER. I have a prepared statement for the record which I would like to submit with no oral comments at this time.

[The statement of Admiral Fowler follows:]

PREPARED STATEMENT OF VICE ADM. EARL B. FOWLER, JR., USN

COMMANDER

NAVAL SEA SYSTEMS COMMAND

Mr. Chairman and members of the committee: I am Vice Admiral Earl B. Fowler Commander, Naval Sea Systems Command.

It is a pleasure to appear before you today to discuss the Navy Shipbuilding Program. I have included some charts to make the information presented easier to understand. If you desire, Mr. Chairman, following my statement, I will respond to any questions.

NAVY SHIPBUILDING PROGRAM

- Major Private Shipyards and Workload
- Status of the Public Shipyards
- Modernization of the Shipyards
- Capacity and Capability of Private Industry
  - — FY 84 Five Year Navy Shipbuilding Program
  - — Ship Deliveries
  - — Projected Workload for Total Private Shipbuilders
  - — Supporting Industry
- Summary

CHART 1

Chart 1 contains an outline of the specific areas covered in this statement. First, I will present an overview of the major private shipyards and their current workload. Then, I will cover the status of public shipyards, modernization of both public and private shipyards, and, finally, I will address the capacity and capability of private industry to execute the FY 84-88 shipbuilding program.

MAJOR PRIVATE SHIPYARDS AND NAVY PROGRAMS (1 JUNE 1983)

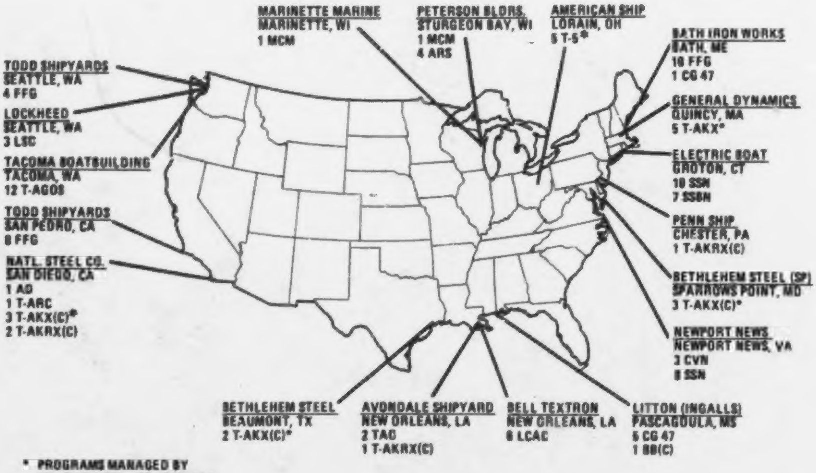

MARINETTE MARINE
MARINETTE, WI
1 MCM
PETERSON BLDRS.
STURGEON BAY, WI
1 MCM
4 ARS
AMERICAN SHIP
LORAIN, OH
5 T-5*
BATH IRON WORKS
BATH, ME
10 FFG
1 CG 47
TODD SHIPYARDS
SEATTLE, WA
4 FFG
LOCKHEED
SEATTLE, WA
3 LSD
GENERAL DYNAMICS
QUINCY, MA
5 T-AKX*
TACOMA BOATBUILDING
TACOMA, WA
12 T-AGOS
ELECTRIC BOAT
GROTON, CT
10 SSN
7 SSBN
TODD SHIPYARDS
SAN PEDRO, CA
8 FFG
PENN SHIP
CHESTER, PA
1 T-AKRX(C)
NATL. STEEL CO.
SAN DIEGO, CA
1 AD
1 T-ARC
3 T-AKX(C)*
2 T-AKRX(C)
BETHLEHEM STEEL (SP)
SPARROWS POINT, MD
3 T-AKX(C)*
NEWPORT NEWS
NEWPORT NEWS, VA
3 CVN
8 SSN
BETHLEHEM STEEL
BEAUMONT, TX
2 T-AKX(C)*
AVONDALE SHIPYARD
NEW ORLEANS, LA
2 TAO
1 T-AKRX(C)
BELL TEXTRON
NEW ORLEANS, LA
8 LCAC
LITTON (INGALLS)
PASCAGOULA, MS
5 CG 47
1 BB(C)
* PROGRAMS MANAGED BY MILITARY SEALIFT COMMAND

CHART 2

Within the private sector, there are eighteen (18) shipyards currently building or converting ships or major craft for the U.S. Navy. These shipyards and their Navy order book are shown in Chart 2.

NAVY SHIPS UNDER CONSTRUCTION OR CONVERSION

(1 JUNE 1983)

SHIPTYPE	QTY	SHIPYARD
AIRCRAFT CARRIER (CVN)	3	NEWPORT NEWS
GUIDED MISSILE CRUISER (AEGIS) (CG)	6	INGALLS, BATH
LANDING SHIP DOCK (LSD)	3	LOCKHEED
GUIDED MISSILE FRIGATE (FFG)	22	BATH, TODD LA & TODD SEATTLE
MINE COUNTERMEASURES (MCM)	2	PETERSON, MARINETTE MARINE
DESTROYER TENDER (AD)	1	NATIONAL STEEL
FLEET OILER (T-AO)	2	AVONDALE
TANKER (T-5)	5*	AMERICAN SHIP
CABLE REPAIR SHIP (T-ARC)	1	NATIONAL STEEL
SALVAGE SHIP (ARS)	4	PETERSON
OCEAN SURVEILLANCE (T-AGOS)	12	TACOMA BOAT
FLEET BALLISTIC MISSILE SUBMARINE (OHIO CLASS)	7	ELECTRIC BOAT
ATTACK SUBMARINE (LOS ANGELES CLASS)	18	ELECTRIC BOAT/ NEWPORT NEWS
PRE-POSITIONING SHIP (TAKX)	5*	GENERAL DYNAMICS
PRE-POSITIONING SHIP (TAKX CONV)	8*	BETH STEEL (SP)/ BETH STEEL BEAUMONT/ NATIONAL STEEL
FAST LOGISTIC SHIP (T-AKRX CONV)	4	NATIONAL STEEL/ PENN SHIP/AVONDALE
BATTLESHIP (BB REACTVN)	1	INGALLS
TOTAL	104	

*PROGRAMS MANAGED BY MILITARY SEALIFT COMMAND

CHART 3

Chart 3 depicts the 91 Navy ships under construction and 13 being converted in the private sector as of 1 June 1983. In addition, three (3) CG-47 AEGIS cruisers will be awarded in the near future. These latter ships represent the balance of FY 83 new construction not yet under contract. The only other FY 83 ship unawarded is the hospital ship conversion. The Navy new construction and conversion program is in good shape and private shipyard overhaul work has improved substantially.

PUBLIC SHIPYARDS

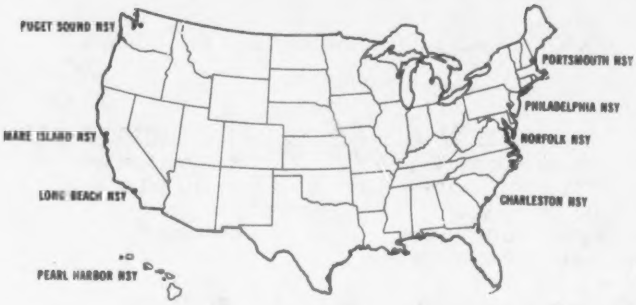


CHART 4

There are eight public shipyards. Since 1967, no new ships have been built in naval shipyards. Their combined employment level is approximately 80,000 and is expected to remain at that level through 1988. Operation of the naval shipyards without personnel ceiling constraints has allowed us to manage our workforce much more effectively than in the past. The workforce is now being more closely aligned with the actual funded workload.

Traditionally, the public shipyards have accomplished the more complex and difficult overhaul and modernization of Navy surface combatants and nuclear power submarines. Work of this nature requires an investment in personnel and facilities that is greater than made by most private shipyards. In 1982, the public to private percentage split of the gross mission-essential depot maintenance workload was 61 to 39 percent, due primarily to the adjustments necessary to accomplish the NEW JERSEY reactivation in Long Beach Naval Shipyard.

The age and number of nuclear propulsion ships will increase in the future causing an increase in nuclear ship workload. With careful, long range planning and management, which we are currently providing, this increase is not a problem. The capacity of the nuclear qualified public and private shipyards is sufficient to meet our foreseeable needs for nuclear ship repair and new construction nuclear work provided no significant drop in productivity or interruption occurs.

Modernization

Modernization of our public and private shipbuilding and repair yards is necessary to reduce cost and improve schedule performance. Since enactment of the Merchant Marine Act of 1970, the U.S. shipbuilding industry has reported expenditures of $2.6 billion in capital improvements to the Maritime Administration (MARAD). According to MARAD records, $782.7 million was spent from June 1980 through June 1982 alone. Some of these funds were spent under the Cost Accounting Standard 414, "Cost of Money as an Element of the Cost of Facilities Capital," for example, $108.7M by Newport News and Electric Boat during calendar 1980-1982. Most of these recent capital investments and those planned for the immediate future are for facilities and improvements that will strengthen shipyard performance in naval ship construction, ship repair and conversions, and in offshore equipment and barge manufacture.

Specific examples of such modernization investments above $30M include:

(A) Newport News Shipbuilding and Drydock's six new cranes, a 1240 foot pier for submarine outfitting and testing, upgraded submarine drydock, a foundry, and an industrial waste pretreatment facility;

(B) Todd Shipyard's Syncrolift System at Los Angeles;

(C) Todd Shipyard's new drydock, pier, crane, and enhanced computer system at Seattle;

(D) New floating drydocks at Jacksonville Shipyards, Avondale, and Todd Galveston.

Facility improvements completed in naval shipyards for the same period (June 1980-June 1981) totaled $208.5 million. These include waterfront facilities, production shops, utilities systems, and industrial plant equipments, some of which are numerically-controlled.

The combined total of investments in capital improvements for both public and private shipyards during that period closely approaches one billion ($991 million). This investment plus the investments made over the previous 10 years have substantially increased shipbuilding and repair productivity on a value added per production worker hour basis. Although direct comparisons cannot be made between the productivity of U.S. naval shipbuilding and foreign commercial yards, the National Academy of Sciences, in a December 1982 report on "Productivity Improvements in U.S. Naval Shipbuilding," concludes that for complex, high-performance naval ships in low volume production, the production efficiency of U.S. shipyards and foreign shipyards are comparable.

DELIVERY ASSESSMENT

1 JUNE 1983 VS 1 MARCH 1982

QTY	SHIP CLASS	EARLIER	LATER	NO CHANGE
3	AIRCRAFT CARRIER (CVN)			3
6	GUIDED MISSILE CRUISER (AEGIS) (CG)			6
3	LANDING SHIP DOCK (LSD)			3
22	GUIDED MISSILE FRIGATE (FFG)	7	1	14
2	MINE COUNTERMEASURES (MCM)			2
1	DESTROYER TENDER (AD)			1
2	FLEET OILER (T-AO)			2
1	CABLE REPAIR SHIP (T-ARC)		1	
4	SALVAGE SHIP (ARS)			4
12	OCEAN SURVEILLANCE (T-AGOS)		12	
7	FLEET BALLISTIC MISSILE SUBMARINE (OHIO CLASS)		1	6
18	ATTACK SUBMARINE (LOS ANGELES CLASS)	1	2	15
81	TOTAL	8	17	56

CHART 5

Now I will cover the ability of the industry to execute the Navy Five-Year Shipbuilding Program. Chart 5 shows the NAVSEA managed ships under construction in private yards and their current, Navy estimated delivery status as compared to the delivery assessments made when I appeared before you on the subject of shipbuilding last March. Eight (8) are earlier, seventeen (17) are later, and fifty-six (56) estimated ship delivery dates are unchanged from our projections of last year. The reasons for the later estimates are summarized below:

o FFG - Approximately one month delay due to incorporation of government initiated changes

o TARC - Four month delay due to shipbuilder problems with their lofting subcontractor and lack of steel erection progress o TAGOS - Four to five month delays due to institution of new types of production methods

o SSN - Three month delay on one hull due to the installation of VLS. A two month delay on another hull announced by the shipbuilder. The estimated delivery date on that hull is now the same as the contract delivery date.

o SSBN - One year delay due to the introduction of the D-5 missile system

Compared to my assessments for the previous years, far fewer changes have been made to our delivery estimates.

FY 84 FIVE YEAR NAVY SHIPBUILDING PROGRAM

	FY 1984	FY 1985	FY 1986	FY 1987	FY 1988	FY 84-88 Five-Year Total
SSBN-726 Class (TRIDENT)	1	1	1	1	1	5
SSN-688 (Attack Submarine)	3	4	4	5	5	21
CVN (Aircraft Carrier-Nuclear)	—	—	—	—	1	1
CV (Aircraft Carrier) SLEP	—	1	—	1	—	2
BB (Battleship) Reactivation	—	1	1	—	—	2
CG-47 (Guided Missile Cruiser)	3	3	3	3	2	14
DDG-51 (Guided Missile Destroyer)	—	1	—	3	5	9
DD-963 (Destroyer)	—	—	—	—	1	1
LSD-41 (Landing Ship Dock)	1	2	2	2	2	9
LHD-1 (Amphibious Ship)	1	—	1	—	1	3
LPDX (Landing Platform Dock)	—	—	—	—	1	1
AMPHIB SLEP	—	—	1	3	3	7
MCM-1 (Mine Countermeasures Ship)	4	4	4	—	—	12
MSH-1 (Mine Hunter-Sweeper)	1	—	4	4	4	13
AOE-1 (Multipurpose Stores Ship)	—	—	1	1	1	3
AE (Ammunition Ship)	—	—	1	1	1	3
AFS (Stores Ship)	—	—	—	1	—	1
AD (Destroyer Tender)	—	—	—	1	1	2
TAO (Oiler)	3	4	4	4	4	19
TARC (Cable Ship)	—	—	1	—	—	1
TAGOS (SURTASS)	—	2	2	2	—	6
TAGS (FBM Support Ship) Conversion	—	2	—	—	—	2
TAK (Cargo Ship) Conversion	—	1	—	—	—	1
TAGM (Range Instrumentation Ship) Conversion	—	—	1	—	—	1
TAFS (Stores Ship) Acquisition	1	—	—	—	—	1
TAH (Hospital Ship) Conversion	1	—	—	—	—	1
TAKR (SL-7) Conversion	4	—	—	—	—	4
New Construction Ships	17	21	28	28	30	124
Conversions/SLEPS/ Reactivations	6	5	3	4	3	21

CHART 6

Chart 6 shows the Navy's proposed five-year ship construction program for 145 ships in FY 84 through FY 88. This includes 124 new construction ships and 21 ships to be converted, reactivated, or acquired. As mentioned in previous testimony, it is anticipated that the FY 85 Five Year Plan will not include a CVN in FY 88.

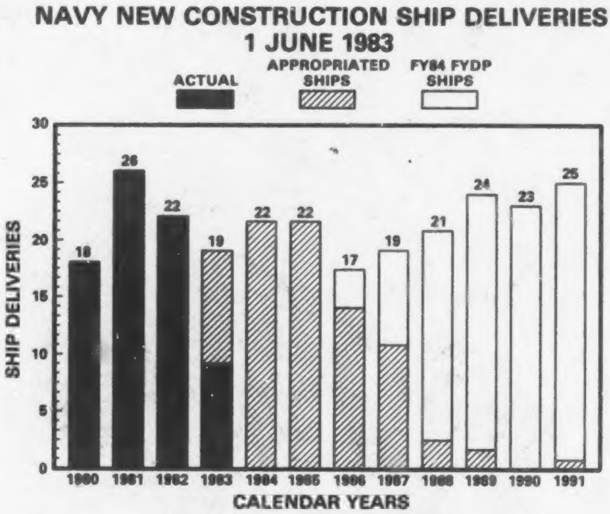


CHART 7

Chart 7 depicts the number of actual ship deliveries in 1980 through 1982, with nine (9) deliveries as of 1 June 1983. Chart 7 also shows the projected delivery of Navy ships from 1983 through 1991, including those Navy ships currently under construction and most of the ships in the FY 84 Navy Five-Year Shipbuilding Program. This shows that the planned delivery rates are well within the industry's capabilities based on their recent proven performance.

SHIPBUILDING INDUSTRY WORKLOAD FORECAST

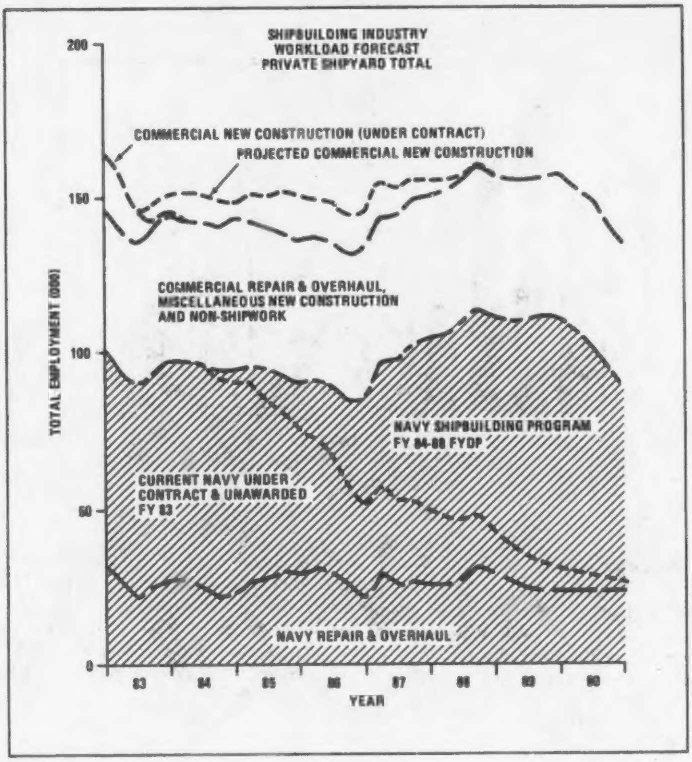


CHART 8

Chart 8 portrays the Navy's forecast of employment in the private sector shipyards through 1990. Included in the workload curve is the current firm work and projected work for commercial, Navy, and other non-ship work. The projected ship construction work is derived from the Navy's FY 84 Five-Year Shipbuilding Program and MARAD estimates of commercial new construction requirements and shows a continuing decline in 1983 to a low of about 145,000 employees. This is from a peak industry employment level of 188,000 in March of 1981. This peak will not be reached again in this decade.

The Navy's portion of the total private shipyard workload (currently approximately 65% of the total) is projected to increase modestly with the expanded Navy shipbuilding program. Consequently, a gradual improvement in the industry's total employment should begin late this year until an employment level of approximately 160,000 is reached in 1988.

Supporting Industry

Ship construction and repair is the assembly or replacement of externally originated materials and components for the most part. Therefore, there is a strong dependence on suppliers and subcontractors.

The Navy monitors this supporting industry's performance. With the decrease in commercial work, the capacity required of most of the supporting industry to execute the Navy shipbuilding program is well within their demonstrated performance. Some moderate expansion of large, highly specialized manufacturing facilities such as AEGIS may be necessary.

Summary

In summary, both the Navy's shipbuilding program and the performance of depot overhauls have improved. Overall employment in the total private shipbuilding and repair industry is continuing to decline as a result of the reduced Navy and commercial shipbuilding programs from the late 1970's through 1980. This employment decline is anticipated to continue well into 1983 until the expanded Navy shipbuilding programs begin to gradually reverse this trend. Unless outyear commercial new construction work increases substantially above those levels projected by the Maritime Administration, the private sector will become more dependent on the Navy for its work. The Navy's Five-Year Shipbuilding Program is well within the demonstrated capability of our current industry.

VICE ADMIRAL EARL B. FOWLER, JR., USN

Earl B. Fowler, Jr., was born in Jacksonville, Florida, on September 29, 1925, son of Earl B. and Veva Carpenter Fowler. He enlisted in the Navy V12 program and entered Georgia School of Technology in July 1943. In February 1946, he graduated with a B.S. degree in mechanical engineering and was commissioned Ensign, U.S. Naval Reserve.

His first duty was aboard the USS COLUMBIA (CL-56). Thereafter, he served on the USS RANGER (CV-4) and the USS WRIGHT (CVL-49).

After graduation from Massachusetts Institute of Technology in January 1949 with a B.S. degree in electrical engineering, he was assigned to the USS LEARY (DDR-879). He then served at the Naval Shipyard, Charleston, South Carolina, and on COMINELANT staff.

Vice Admiral Fowler served at the Navy Radiological Defense Laboratory, San Francisco, and Hunter's Point Naval Shipyard. After 2 years as Material and Engineering Advisor in the Military Assistance Advisory Group, Republic of China, he served on COMSERVPAC Staff at Pearl Harbor, Hawaii.

In September 1965, he was ordered to the Pacific Missile Range, Pt. Mugu, California, as Head, Ship Engineering Division, working on the design of ships for the Apollo Program and National Range Support.

Vice Admiral Fowler came to the Naval Material Command in July 1967 as Project Manager, Instrumentation Ships Project Office, PM-5. He then became Project Manager, Oceanographic, Mine Patrol and Special Purpose Ship Acquisition Project. He attended the Harvard University Advanced Management Program during the fall of 1971.

In January 1972, he reported to the Naval Electronic Systems Command as Deputy Commander for Material Acquisition. Promoted to Rear Admiral on August 1, 1974, he served as Vice Commander until June 30, 1975, and as Commander from August 31, 1976, to March 21, 1980. He was promoted to Vice Admiral and became Commander, Naval Sea Systems Command, on March 31, 1980.

He was awarded the Legion of Merit for meritorious services performed at the Naval Electronic Systems Command. In addition, he has the Meritorious Service Medal, the American Theater Medal, World War II Victory Medal, Occupation Medal (Europe), and the National Defense Medal with star.

Vice Admiral Fowler is a member of Delta Tau Delta, Georgia Tech; Pi Tau Sigma Honorary Mechanical Engineering Fraternity; Institute of Electrical/Electronic Engineers; the American Society of Naval Engineers; and the Society of Naval Architects and Marine Engineers.

Vice Admiral Fowler and Mrs. Fowler, the former Helen Marie Jorgensen of Sioux City, Iowa, reside in Alexandria, Virginia. They have two children, Mary Helen and Joan Ann.

600-SHIP NAVY MANNING

Senator **Stevens**. Thank you very much.

Gentlemen, I am going to submit to you some of the questions that we have had. I see Senator Rudman is here. Let me talk about the manpower problems.

With the limits we have on spending that come from the budget process the prospect of increased manpower is very uncertain.

Can you man a 600-ship Navy if the Congress denies the manpower increase that has been projected for fiscal year 1984 and the following years?

Admiral **Walters**. Senator, we are concerned about the reduction in manpower that is being discussed. However, we have experienced superb retention of experienced people in the Navy. Therefore this does affect somewhat the accession rate that we need to maintain the numbers required to man the ships.

We are looking at the possibility of this end strength constraint and so far I believe that we feel that it is going to create problems for us, but that we can live with it.

Senator **Stevens**. We contemplate, as I understand it, no increase in end strength at all. If that is the case, will you be able to man the ships to be commissioned in 1984?

Admiral **Walters**. Will we be able to man the ships that are commissioned?

Senator **Stevens**. Yes.

Admiral **Walters**. Yes, sir, we will. The problem is that we have programmed our manpower to be able to develop the manpower base ahead of the ships and to give us a better foundation on which to work. This is going to mean some tightening of the belt, there is no question about it. We are going to have to tighten the overall manpower structure of the Navy.

Our first priority of course will be to man the ships that we have coming along.

BATTLESHIP MANNING

Senator **Stevens**. I note that you have two additonal battleships to bring on and some 1,500 people; is that right?

Admiral **Walters**. Yes, sir, 1,500 people roughly per ship.

Senator **Stevens**. If you don't have an end strength increase, where are you going to get those people?

Admiral **Walters**. If we don't have additional end strength, obviously we will have difficulty manning additional battleships, Senator, but we have been able to make up part of the deficit that we have experienced this year, for example, by the fact that one of the the battleships has been slipped.

We already have one battleship manned and we have the other people being ordered to the second one. the fact that we have slipped the third ship a year by congressional action, we have used those people for other purposes.

Senator **Stevens**. I am informed that the two battleships would provide enough manpower for three Trident submarines, four attack subs, three cruisers, two destroyers, and three mine sweepers.

Is that about right?

Admiral **Walters**. I can't add up that fast, Senator, but I suspect that your figures are probably correct. The manning of a battleship we recognize is heavy. However, the battleship gives us a capability that we cannot get through any other means, particularly the additon of gunfire support for Marine elements that we have been sadly lacking over these many years.

We also at the same time have brought a new offensive capability into these ships. We still think the battleship is a good investment in spite of the fact that it is rather manpower intensive because of the kind of systems that it has in it in comparison to the kind we are bringing into the newer ships.

Senator **Stevens**. I am a broken record on battleships, but I would like to have you give us a paper telling us where you are going to get those people because I don't see any increase in end strength.

[The information follows:]

The Navy manpower plan in the fiscal year 1984 President's Budget includes 1,523 end strength to man the battleships. This includes 1,515 personnel for the crew of the *Iowa* (BB-61), four to complete manning on the *New Jersey* (BB-62), and four for the *Missouri* (BB-63) precommissioning crew. If our requested end strength is reduced, the Navy would have to reprogram manpower to man the battleships. The end result, of course, would be reduced capabilities in other areas of the Navy. Nevertheless, the battleships are essential to our force structure and although not desirable, we would resort to this course of action rather than lose these most capable ships.

TREND OF FUTURE BUDGETS

Senator **Stevens**. I predict as we get into the battles of 1985 and 1986 in terms of the budget that the end strength of the whole Department of Defense is going to start down, the trendline is going to be down, not up. I just don't see how it can continue to expand with the budget restraints that are going to get worse in 1985 than they are in 1984, and worsen more than that in 1986 than they are in 1984 and 1985.

We keep warning people not to program additional end strength. You are in the same situation as the Air Force. The Air Force continues to project an increase in end strength and it does not seem to me likely to happen.

Senator Rudman.

CG-47

Senator **Rudman**. Thank you, Mr. Chairman.

I just have a few questions on the shipbuilding program. I am curious about the CG-47 program.

What is the estimated cost at this time in this year's dollars of the CG-47?

Admiral **Walters**. Those figures are about $1 billion. We have three ships for $3,435 million and that includes some long lead for the next three. But it is close to $1 billion a ship, Senator.

I can provide the exact figure for the record.

Senator **Rudman**. For the purpose of my question that is sufficient.

Now, on the Trident program what are the annualized costs in this year's dollars of Tridents commissioned and ready to go into the fleet?

Admiral **Walters**. It is $1.8 billion. That, too, does include some long lead because we have procured 2 years long lead for those ships.

Senator **Rudman**. I was under the impression it was about $1,650,000,000 in this year's dollars, roughly.

Admiral **Walters**. That is pretty close. The actual end cost of the fiscal year 1984 ship is $1,848 million.

Senator **Rudman**. Having looked at both vessels and confessing a real ignorance of the complexities of shipbuilding, but nevertheless looking at some of the sub systems, I don't understand why that CG-47 is costing as much as it is.

It just seems to the observer in looking at the systems involved that assuming that the Trident at 1.6 is a reasonable cost, and certainly we all know in this committee the history of that program and what the Navy has done to hold the cost down, assuming that is a valid cost, it just seems that the $1 billion figure for the CG-47 is very high for what you get.

I would like you to comment on that, whether or not the Navy is surprised by the cost of that at this time, particularly since the amount of labor that goes into the CG-47, according to what the staff has told me, is only about one-third of the labor that goes into, say, a Trident.

Admiral **Walters**. I am sure that is correct, Senator. I think all of us are concerned about the cost of our weapon systems. However, the CG-47 is the most heavily armed ship from the standpoint of weapons that we have built since World War II.

Senator **Rudman**. That is true, but that figure does not include the cost of those weapon systems, I do not believe.

Admiral **Walters**. Yes, sir. The total includes all weapon systems.

Senator **Rudman**. What about the missiles themselves? That is not included?

Admiral **Walters**. No, that is not included.

What I am talking, though, are the weapon systems installed in that ship. As I recall, the weapons or ordnance cost, not the bullets and the missiles, but the ordnance cost for the systems in that ship run in the neighborhood of $400 million.

You have, first of all, the world's most advanced radar system being installed in the ship. You have gun systems. You have ASW systems. You have surface-to-surface missile systems. You have communications and command and control facilities in the ship to be able to permit it to control the antiair warfare aspects of the battle group so that we have in that one cruiser all of the elements of firepower essentially that we put in all our ships.

Of course that is what distinguishes a cruiser from a destroyer or a frigate. A cruiser is a multimission ship. So it is a very heavy investment in equipment and weapons.

FFG VERSUS CG-47

Senator **Rudman**. Admiral Walters, what is the comparative displacement between the largest in the FFG program and CG-47?

Admiral **Walters**. In the displacement?

Senator **Rudman**. In terms of size.

Admiral **Walters**. The cruiser is roughly two and a half times in displacement. Of course the frigate is primarily an ASW ship with a self-defense capability in it and that is all.

Senator **Rudman**. Although I have not done a great deal of research on this, I wonder whether or not the CG-47 program is one that is going to be able to keep on schedule in light of all the procurement difficulties in terms of where we are headed with the budget.

I think what I was trying to think of is the DDG-51 which my staff has reminded me of. What is the displacement of the DDG-51?

DDG-51

Admiral **Walters**. The DDG-51 has a normal displacement of 8,200 tons. It is about 1,400 tons less than a CG-47 and about double the displacement of a FFG.

Senator **Rudman**. We are now finishing up on that program, I understand.

Admiral **Walters**. We are finishing up the design. We are now in contract design.

Senator **Rudman**. What is the now-year cost of that program per ship, apples to apples with the CG-47?

Admiral **Walters**. The only way I can answer this, apples to apples, is that we have programed the cost of that ship to be about three-fourths of the cost of the cruiser.

Now, the cost in the year that we introduce the lead ship is going to be as expensive as a CG-47. We have already built 10 of the CG-47's so we are now getting that production cost down. The non-recurring costs are behind us.

The DDG-51, however, when it gets into serial production we fully expect will cost no more than 70 or 75 percent of the cruiser. It has less capability.

Senator **Rudman**. I understand that. We are talking about approximately $1 billion difference between four of the DDG-51's and the CG-47's. I guess what I am driving at, Admiral Walters, is that we always have a lot of problems around here as we get late in the appropriations process and we went through it last year, typically with DOD. I don't think so much in terms of prioritizing.

The Navy is set on a course of building *X* number of CG-47's, *X* number of DDG-51's. I understand the capability difference, and so forth. But given the amount of money we have to deal with, and I am not suggeting what that amount is, I would hope that the Navy would have some alternative programs to suggest to us because I think that we do very poorly when we make those decisions without advice.

We don't get that advice sometimes because people don't want to make suggestions of how we can change because that, of course, deletes from what your most desirable objective is. We had that problem with the Secretary of Defense last year. In fact, the Chairman and the Secretary of Defense had a very interesting dialog, as I recall—interesting would be understating it—on that particular point.

SHIPBUILDING RELATIVE COSTS

The main thrust of my questions this morning is simply as we look at the relative cost of these systems and realizing that $1 billion in terms of outlays is significant, I would hope that the Navy Department would have some alternative mission in this 600-ship Navy that we might approach over the next several years.

Mr. Chairman, that is really all I want to talk about.

SHIP OVERHAULS

Senator **Stevens**. Mr. Secretary, we note that there are 64 overhauls in this budget that is before us for 1983, the one we are dealing with right now, but there are only 49 in the 1984 budget. That is an annual variance that is substantial.

Can you tell us why that happens?

Admiral **Nunneley**. I think I can address that, Senator.

The primary reasons for the major reduction in number of overhauls between fiscal year 1983 and fiscal year 1984 are that we retired or inactivated the DD-931 and 945 classes early as approved by the Congress last year and we placed four additional classes of surface combatant ships on extended operating cycles.

The net effect was the removal of a number of overhauls from the 1984 program. The program will come back up in 1985 to about the same level as it is being executed in fiscal year 1983.

Senator **Stevens**. Two submarine overhauls are deferred.

How many overhauls have been deferred?

Admiral **Nunneley**. There have been a total of 13 overhauls deferred in the 1983 program. Two of them for financial reasons, the other 11 for operational reasons.

Senator **Stevens**. Eleven for what reasons?

Admiral **Nunneley**. For operational reasons. That is, the ship is scheduled to overhaul in fiscal year 1983, it might not return from deployment until October or November and its overhaul then would start early in 1984 vice in fiscal 1983 as it would normally be scheduled.

Senator **Stevens**. Doesn't that increase the cost of our overhaul program if you have the rate of 64 going on now and you are going to have a rate of 49 next year? Obviously you are going to have to pick it back up to 64 in 1985 to catch up, aren't you?

Admiral **Nunneley**. Yes; 1985 is going to cost us more. The 1984 program is smaller simply because we cut back on the number of overhauls primarily for the reasons I mentioned before, but we are eventually going to have to pay the piper. The Fleet is getting larger. The ships that are delivered are getting more complex.

It is going to be a cost of ownership as we look to the future.

COST OF SHIP OVERHAUL PROGRAM

Senator **Stevens**. I think that annual variance is increasing the cost of the overhaul program. We have a proposal that we should require a split between private and public shipyards of 50-50. Currently 70 percent of your overhauls are done in public yards.

Admiral **Nunneley**. Yes, sir.

Senator **Stevens**. What would be the effect of the 50-50 proposal if it were placed in effect in a year when you have 49 overhauls compared to 64 this year?

Admiral **Nunneley**. The effect would be the redistribution of work between the public and private yards. In fiscal year 1984, we would essentially be transferring of the order of 19 overhauls, it is my recollection, from the public yards to the private yards.

Senator **Stevens**. How is that 49 going to be spilt? 70-30 again?

Admiral **Nunneley**. Right now with the submit to the Congress, the split is 32 percent private, 68 percent public. We have a tentative mark or a House Armed Services Committee report which marks the program $131 million.

When the dust settles we will have to go back and rework the program and reload. The percentages will be somewhat different. That percentage has varied between 32 and 39 percent over the past several years, averaging 35 percent for the private and 65 percent for the public yards.

Senator **Stevens**. What is the split on the 61 overhauls for 1983? Is that 32-68?

Admiral **Nunneley**. For fiscal year 1983 the split is a little higher than that. As I recall, it is 34-66. For fiscal year 1984 we have 32 percent in the private yards.

Senator **Stevens**. Pardon?

Admiral **Nunneley**. Thirty-two percent in the private yards and 68 percent in the public yards.

Senator **Stevens**. Roughly 21 of those overhauls are going on now in private yards and next year you are going to have about 15; is that right?

Admiral **Nunneley**. For next year I think the numbers are a little higher than that. Next year we have 21 overhauls scheduled private for fiscal 1984. We have 27 overhauls scheduled for naval shipyards for fiscal 1984. That is with the submit we have made to the Congress.

Senator **Stevens**. The dollar value you are splitting,

Admiral **Nunneley**. Yes, sir. The dollar value. It is not the number of overhauls.

Admiral **Fowler**. If I may, I would like to supplement what Admiral Nunneley said on your question about the impact on the Navy of a 50-50 split.

In addition to moving about 19 ships into the private sector it would have a very dramatic negative effect on fleet readiness especially over the long haul. We don't totally comprehend yet what that impact would be. We are still studying that.

PUBLIC VERSUS PRIVATE SHIPYARDS

Senator **Stevens**. Why would that be the case when we are primarily relying on the private sector to pick up the fluctuation?

It seems to me that is a tremendous burden to put on the private sector, to be there 1 year and not be there next year, but to be back again by 1985. I don't know how you can marshal private sector support with a graph like that.

It literally is very volatile as far as the support you are asking the private sector to give to the overhaul program.

Admiral **Fowler**. The nature of the overhaul business in the private sector is that there are so many yards out there that it is always volatile for them. Any one yard is going to vary up and down quite dramatically.

The long-term effect that I wanted to mention to you would be that two naval shipyards would probably close: Long Beach Naval Shipyard and Philadelphia Naval Shipyard. It will also result in the need to defer some of the nuclear ship overhauls in order to keep that part of our program under the dollar limitation. Deferred nuclear work is one of the long-range consequences we have to look at.

What we are doing currently is taking a hard look at the mix in 1984 and 1985 to try to share the burden somewhat, recognizing that the private sector is in pretty bad shape as a result of commercial work dropping off to nearly zero, and try to do better in that regard.

We need to know what the 1984 cuts are going to be so that our planning can be more stable and we can carry out the program that we plan. There is an awful lot of uncertainty in all of this.

We understand the importance of the private sector. We are trying to accommodate that, but a split at this time at the 50-50 level or any significant decrease in the 70-30 level really has a significant long-term impact for the Navy.

Senator **Stevens**. That means two things.

One, you have a problem coming up, I understand from the staff, about your nuclear overhaul in terms of a limited capacity in the private sector to move into that area. But it does appear to this committee that you are protecting the Navy shipyard, expecting the private yards to go broke one year and yet to be there the next year.

Admiral **Nunneley**. I would like to respond to that.

We are, as a result of direction from the Armed Services Committee, reevaluating and analyzing 70-30. We are specifically looking at 50-50 and 60-40. The percentage itself is more a reflection of the mix of ships in any given fiscal year, the complexity of those ships and capabilities that now exist in the public and private yards.

We normally assign our more complex ships to the public yards where you have to have specialized skills and specialized equipment and facilities to overhaul those ships. The aircraft carriers, the nuclear submarines, the nuclear surface ships, the complex surface combatant ships for the most part are assigned to the public yards.

The less complex ships are assigned to the private yards. So the percentage really is more a function of the mission of ships on an annual basis, but, as Admiral Fowler indicated, we are relooking at that present capability.

NUCLEAR SUBMARINE OVERHAULS

Senator **Rudman**. Would the Chairman yield for one question on that point?

It is my understanding, that in terms of submarine overhaul you have a fairly limited number of places to choose from.

Admiral **Nunneley**. That is correct.

Senator **Rudman**. My understanding is that they are either overhauled at Portsmouth Naval Shipyard on the New Hampshire-Maine border or in California?

Admiral **Nunneley**. We have six nuclear-qualified public shipyards and two nuclear-qualified private shipyards.

Admiral **Fowler**. Only one of the private yards does overhaul work. Newport News Shipbuilding & Drydock does refueling overhauls of the ballistic missile subs. Electric Boat does not do overhaul work.

Senator **Rudman**. When you try to distribute that kind of overhaul you start having limitations as to where you can send it; is that not correct?

Admiral **Fowler**. The number and age of nuclear ships in the Navy is increasing. So the workload in nuclear overhauls is increasing. This is the No. 1 factor that we do all our planning around.

There are only eight yards that do nuclear ship work for construction and overhaul. That is where you start to plan. Then we have aircraft carriers that we have to distribute on top of that. Then we go to the more complex ship and from there into the less complex ship.

It is an unfair characterization to say that we are trying to protect the Navy yards even though some people who have testified before the Congress have alleged that. I think we are trying to do what we think is best to satisfy the national interest against a very difficult and changing problem.

The workload in the private sector only dropped to its present bottom condition in the last few years. We are trying to bring the private sector up to handle the more complex ships. We are doing that by putting the short-term availabilities into the private sector.

Only last year or the year before last we started our first cruiser SRA in the private sector. So we are moving in that direction.

Senator **Stevens**. Senator Stennis.

NEED FOR THE DDG-51

Senator **Stennis**. Thank you, Mr. Chairman.

I won't take much time. I am really on leave from the floor on the supplemental bill.

Admiral Fowler, I was reading the other night something about the *Arleigh Burke* class DDG-51. I remembered the careful planning the Navy did with reference to the destroyers to make a more capable Navy so far as destroyers were concerned. That was many years ago in the Armed Services Committee.

Now you are moving into this *Arleigh Burke* class as I understand, your first DDG-51. I remember your plan here was to have this one come along. You have it in the budget this year which proves that you thought it was essential. Is that right?

Admiral WALTERS. Yes, sir.

Senator STENNIS. You got it put in the budget?

Admiral WALTERS. Yes, sir.

Senator STENNIS. Just cover the precise need that you have for this class to be brought in at this time.

Admiral WALTERS. This ties in very closely with Senator Rudman's questioning about alternatives.

We have been building in the last several years the low mix part of our Navy because that happened to be the need that had to be fulfilled at that time.

You have good recollection of your own participation in the building of the ships now that we are now faced with replacing. The guided missile destroyers, DDG-2 and DDG-37 class which were built commencing in the late 1950's are approaching 30 years of age in the last part of this decade.

SHIP RETIREMENTS

By the time that we introduce the first DDG-51's we are going to start that bow wave retirement of those 33 ships. Now, in addition to those 33 ships we have built only 4 DDG's, the ones that we call the *Ayotollah* class, the 4 Iranian ships that are really guided missile destroyers.

So we have 33 ships that are going to go out of service that we desperately need in our fleet if we don't replace them. The DDG-51 is one of those alternatives that we have looked at because it is a cheaper ship and we have kept very stout cost objectives on that ship to assure that we get capability at the best possible price.

Yes, we are very strong on the DDG-51 and it is one of the alternatives that I think Senator Rudman alluded to. There are others we are looking at. But that is the one that we have in position now to be able to start building.

Senator STENNIS. That is very clear.

Will you identify those ships that are going out with the numbers.

Admiral WALTERS. The DDG-2 class is the *Charles Francis Adams* class. The others are the DDG-37 class which is the Dewey class. There are about 23 of one and 10 of the other. They were all built in the late 1950's, early 1960's.

Senator STENNIS. When you say going out, that means they go along, they no longer represent the U.S. Navy with modern weaponry in this field?

Admiral WALTERS. Yes, sir, Senator Stennis. The reason is simply this. Those ships are destroyers. They are not very large. The smallest of the class, the most numerous, are about 4,000 ton ships. The larger ones are about 6,300 tons. They have thin hulls. They were built like destroyers. They have a limited amount of electrical generating plants. Their engineering plants are wearing out. We don't have the capability to extend their service lives as we do, for example, the more sturdily built ships like carriers, some of the amphibs and some of our cruisers.

Thirty years is just about all you can get out of that kind of ship. It is built that way to start with.

SHIP MODERNITY

Senator STENNIS. I remember I used to read about how many ships the Soviets had, two or three or four times as many as we had, and I would worry about that. I found out, though, they counted everything regardless of how old it was, and our strength was in the modernity of our ships.

That is your goal you set out to achieve. This is one of the things that you have reached now in that program. Is that correct? I want to be sure.

Admiral WALTERS. That is correct, sir. We have modernized those ships. Both of those classes have been modernized once. Just as we are now starting to modernize the DD-963 class as they approach 10 years of life, we are now looking at upgrades necessary to put in them.

Those ships are only 10 years old, they have lots of capability that can be added.

SUBMARINE QUIETNESS

Senator STENNIS. I remember going down in the general area of Puerto Rico—I am not much of a traveler—on the question of quietness of all of our submarines. They made it clear, very clear, in 2 or 3 days down there the high importance of this nondetection capability that you have and that was a big part of our superiority over the Soviets.

Now, what about the supremacy in that field, the quietness of the submarines? Are we still the standard bearer leading the others on those points?

Admiral WALTERS. Yes, sir; I think we are in both our submarines and surface ships. We are confident that we build the best submarines in the world. Certainly we will continue to watch this very closely because we feel that this is an area that pays great dividends to us.

As each class of submarine comes along we take into effect directly, the engineering knowledge that we have been able to acquire since we built the last ship, to make the next one better.

The 688 is better than its predecessor. I am sure the new submarine that we will start to design shortly will be better than the 688. The DD-963 is the quietest ship that we have built. Those have been built in your part of the country.

The FFG's are quiet ships. As a matter of fact, the CG-47 just completed her sound trials down in our test facilities in the Caribbean and we were quite pleased to find that she is very bit as good as the DD-963.

We are making this a specific design objective of the DDG-51 to make her even more quiet because, Senator, as long as we are involved in acoustic detection of submarines, then quietness of the detection platform is very important to us.

Senator STENNIS. I don't want to ask anything now that is classified, but we had a great debate here on the MX.

Isn't it true that we rely a great deal on the Navy part of the triad and one of the main points in that is that we have a superiority so far as the noise to the point that the Soviets cannot tell where our submarines are? Is that right?

Admiral **Walters**. Yes, sir. The security of our submarine force is a strong point, perhaps its strongest point as a member of the triad. We are very proud of our contribution to the strategic deterrence capability that we provide in our Trident, Polaris, and Poseidon fleet.

Senator **Stennis**. I am proud of what you have there and the potential of it.

Mr. Chairman, I thank you vey much.

COST OF SHIP REPLACEMENT

Senator **Stevens**. The cost of those vessels that you are replacing, the new ones, is about $1 billion apiece, isn't it? That is, the new ones that are coming in as you retire those you were talking about with Senator Stennis?

Admiral **Walters**. DDG–51's?

Senator **Stevens**. Yes.

Admiral **Walters**. By the time we start building in the late 1980's I suspect the price will be close to $1 billion if we continue to have inflation. The figures that we have been using are 1983 dollars. We expect those ships to be about $700 million in fiscal year 1983 dollars.

Now, what that will be when we apply inflation in 1988 and 1989 I don't know, Senator. We are talking about 1983 prices of $700 million.

Senator **Stevens**. I am a little worried about what we are doing here in terms of the number of vessels we are going to have under construction in the out-years.

What is this request for $336 million for four SSN–688 class attack submarine construction profile? Does that mean you are going to start four ships in 1 year, four submarines in 1 year under that program?

SUBMARINE CONSTRUCTION

Admiral **Walters**. We need to be building more submarines than we have in the past, Senator. We have only been building one or two submarines a year. We need to be building three or four.

Senator **Stevens**. At the same time you are doing to be building four of these new ships that we have just been talking about, at $1 billion apiece we are going to be building four submarines?

Admiral **Walters**. That is correct.

Senator **Stevens**. And two carriers and how many cruisers?

Admiral **Walters**. We don't have plans to build any more carriers through the remainder of this decade. With the two carriers that we got last year, with the extension of the *Midway*——

Senator **Stevens**. The carriers will still be under construction while you are building these?

Admiral **Walters**. They will still be under construction; yes, sir.

Senator **Stevens**. Your construction budget in 1985 and 1986 will constantly expand in terms of dollars; is that right?

Admiral **Walters**. No, sir, not particularly. We have the big influx of increase in shipbuilding dollars in the 1982, 1983, 1984 period.

Senator **Stevens**. I am talking about outlays now, Admiral.

Admiral **Walters**. Outlays, yes, sir; the outlays in SCN stretch out over a period of 6 or 7 years.

Senator **Stevens**. That bothers this committee more than authorization. Our problem is to stay within that outlay ceiling that the budget has shoved at us.

Have you built three submarines a year in recent years?

Admiral **Walters**. We have.

Senator **Stevens**. How long ago?

Admiral **Walters**. In the mid-1970's. We have built as many as six a year, as I recall.

Senator **Stevens**. In terms of the volatility of this construction schedule we are going from one or two a year to a minimum of four a year, as I understand; is that right, in terms of submarines?

Admiral **Fowler**. We need to build 3⅓ SSN's to maintain a force level of 100. During the past few years we have had problems with one of the two shipbuilders. These problems have since been resolved. One year we were cut back to one ship because people said you can't build them.

Now the shipbuilding program in the country is going well. Costs are down. If you want to build a ship, now is the time to buy one. You have the best marketplace you have had in years and years.

Senator **Stevens**. That is true, but you are building in 1985 and 1986.

SHIPBUILDING ECONOMIC TRENDS

Admiral **Fowler**. It is my judgment that it will be the same then. I see nothing in the commercial marketplace that will change the trend in the country. Inflation will stay down. We are looking at 1 or 2 percent on material, 8½ percent on labor, and we are still looking at the labor contracts that have been negotiated over the past 2 years.

It is my hope that the labor rates will stabilize and this high inflation that we have had has been such a disaster will not come back again in the next few years. We are in a good position in the marketplace. If we can force competition, we are going to get the best ships we have ever been able to buy at the best prices.

TAGS SURVEY SHIPS

Senator **Stevens**. I have one last area of questioning and then I will submit the rest of the questions. Tags survey ships, you have a request of $34½ million for advanced procurement to convert in 1985 two Ready Reserve ships. It is my understanding those ships are already over 20 years old and you want to convert them.

Can you tell us why you couldn't find a newer commercial vessel for conversion?

Admiral **Walters**. First, we have not ultimately determined which ships we will convert. It is true that the ones we have looked at have been the C-3 hulls in the ready reserve fleet. We are continuing to look at any other opportunities for ships to convert.

We need these ships very badly to do the survey work which supports the Navy's strategic program. So, it is becoming a pressing requirement. We have not decided right now, today, on the ship that we are going to convert. We are going to get the best ships we can to do the job at the best cost.

Mr. **Pyatt**. One of the things we have to consider in looking at potential alternatives in building those ships is that most of the ones that are available are very old and have the problems that you have outlined here. This brings on a set of problems all its own. These ships will be in operation quite a bit. We think that we should look into the availability of efficient diesel powered ships that can be manned with small crews. This will most likely entail the conversion of foreign flag ships because there are few U.S. candidates.

We have to sort through those issues very soon because it is important to replace the ships that are currently being used.

Senator **Stevens**. Do you have any other questions, Senator.

Senator **Rudman**. I do, but if you have to leave, I will be happy to close the hearing. I have four or five questions.

Senator **Stevens**. Thank you very much.

NAVY SHIP LEASING CONTRACTS

Senator **Rudman** [presiding]. I think these probably are principally directed to you, Mr. Pyatt.

On the floor right now is this pending amendment offered by the Senator from Ohio, Senator Metzenbaum, that I am sure you are familiar with.

Were that amendment to be adopted, it would bar prospective indemnification to various companies involved in the leasing program, not prospectively, but, if you will, retroactively.

I have really four questions relating to that which will be helpful to us on this committee during our discussion of this amendment this afternoon. Since I have you here I was going to ask you in private, but I will ask you in public.

The first question is on the T-5 and T-ADX lease contracts.

Do those contracts contain indemnification provisions in the event the contractor is denied the tax credit that was anticipated when they made their bid?

Mr. **Pyatt**. Yes, sir.

Senator **Rudman**. The second question is in the view of the Navy legal department, how likely is it, looking at available court precedents and tax court precedents, that the contractor is going to qualify for the investment tax credit?

Mr. **Pyatt**. When we started out a year ago, the availability of the investment tax credit for ships of this kind was uncertain but we believe the ships qualify for it. In our analysis we carried both cases for prices with investment tax credit and without it. These were the analyses we presented during the course of discussion.

I am not a lawyer. I can get equally plausible arguments on each side. There are relatively few precedents on which to base a conclusion. There are ships being operated in MSC service now that do receive investment tax credit.

Senator **Rudman**. That being the case, if there were some serious questions on whether or not those investment tax credits would be available, why did the Navy opt to guarantee what was really a questionable tax benefit?

Mr. **Pyatt**. What we said was that before they enter into service with long-term financing, the operators would have to go to the IRS and get the appropriate IRS rulings so that the numbers will all be sorted out in advance of making any payments. This would preclude windfall profits for the contractors.

In commercial practice, when there are issues like this, that is the way they are typically handled.

Senator **Rudman**. Are you saying that the indemnification provisions would not come into effect if they did not get a favorable ruling? What you would do is go back and renegotiate the contract?

Mr. **Pyatt**. We would have to reprice the contract.

Senator **Rudman**. What cost would be involved in renegotiating that clause if Congress denied funding authority for indemnification?

Mr. **Pyatt**. For the investment tax credit alone it would be $2½ million a ship a year.

Senator **Rudman**. How many ships a year are we talking about?

Mr. **Pyatt**. We are talking about 13 T-ADX's for a period of 25 years.

Senator **Rudman**. Each year?

Mr. **Pyatt**. $2½ million a ship a year.

Senator **Rudman**. And there are 13 ships a year?

Mr. **Pyatt**. Yes, sir.

Senator **Rudman**. You are talking about 30 some odd million dollars times 25, you are talking three-quarters of a billion dollars?

Mr. **Pyatt**. Yes.

Senator **Rudman**. The final question is really more of a policy question.

Does it strike you as a little inconsistent that one side of the Government is telling its suppliers that we want you to do business this way when there is a serious conflict with another branch of the Government; namely, the Internal Revenue Service on the other side of that issue?

Mr. **Pyatt**. Mr. Chairman, I have spent over 20 years in the Government service and I find that a very common occurrence.

Senator **Rudman**. It does not speak too highly of the executive branch of the Government, I tell you that.

Mr. **Pyatt**. Or of the Congress, sir. We are by and large implementing the laws of the land.

Senator **Rudman**. I tell you what, I expect this afternoon that Congress is going to make those conflicts a little less difficult. I expect we will eliminate that conflict and I will probably support it.

Thank you very much.

SUBMITTED QUESTIONS

The committee has additional questions which we will submit for your response.

[The following questions were not asked at the hearing, but were submitted to the Department for response subsequent to the hearing:]

ADDITIONAL COMMITTEE QUESTIONS

NEW ATTACK SUBMARINE DESIGN

QUESTION: The Navy has also added $7 million to the Advanced Nuclear Reactor Components R&D program for work incident to the new design nuclear attack submarine. What changes are we anticipating in the way of new nuclear reactor designs for SSNs?

ANSWER: Research and development effort in the nuclear propulsion area is ongoing. Included in this effort is development of new and modified cores, components, materials and systems. The principal new development is the next generation reactor, called the Advanced Fleet Reactor. The objective for this reactor is increased power density to provide more power from a given size reactor. Work includes design, development, and fabrication of a prototype core and associated components, and installation and lifetime testing of the reactor in a land-based naval prototype.

QUESTION: Could FY 1984 work begin at a lower level of funding, say $3-4 million?

ANSWER: The FY 1984 figure of $7 million is a "bare-bones" request. The propulsion plant design and development work has already been pared to eliminate all but essential work which must be completed in FY 1984 to support what is a tight propulsion plant design and development schedule for a FY 1989 new design SSN. The new attack submarine must meet stringent goals to maintain an advantage over the Soviet threat in the 1990's. Development of reactor plant technology must proceed now to support meeting these goals. For example, developments to support a new reactor coolant pump design are necessary to meet the requirements for the next generation SSN. Also, extensive design studies are needed to support development and application of improved features to other propulsion plant components and systems. The proposed reduction would seriously jeopardize our ability to maintain an advantage over Soviet submarine technology that has already begun to appear in operational submarines. The necessary systems, arrangements, acoustics, and long lead component design and development which must be started now to meet the demanding requirements for the next generation attack submarine cannot be done for less than $7 million.

The Navy R&D budget request for Submarines (Advanced) is $34.6 million above last year's projection for the FY 1984 program. The increase is for your separate projects, including one to support the design of a new attack submarine.

QUESTION: What is the Navy requirement for a new attack submarine?

ANSWER: The Soviet submarine threat is increasing dramatically. The projected improvements in Soviet submarines in the 1980's and 1990's will continue to erode the acoustic advantage that our submarines have enjoyed for years. In an effort to maintain our lead, we have determined what is required for a submarine to counter the increasing Soviet submarine threat. Based on these requirements, we have explored the range of technologies needed to maintain our edge in submarine warfare. On the basis of this review, it appears clear the most effective way to maintain our combat superiority in submarine warfare is through the development of a new design attack submarine.

QUESTION: Shouldn't a new attack submarine program be highlighted as a separate program, rather than started through the on-going submarines (advanced) program?

ANSWER: The Navy did not consider creation of a new program element appropriate for the FY 1984 work associated with a new design attack submarine.

FY 1984 funding requested in the Submarines (Advanced) program is that needed to continue to build submarine technology on a schedule which preserves the option to proceed with a new design submarine authorization in the late 1980's. The Navy elected to pursue this work as a part of existing program elements because the technology needed for a new design submarine builds upon work already being done in existing elements and is a logical extension of on-going programs.

SHIP SYSTEMS ENGINEERING STANDARDS (SSES)

QUESTION: Does the Navy support the $6 million add-on by the House Armed Services Committee for the SSES program?

Answer: The additional $6 million funding wouldwill be used to mock-up two of the weapon zone/modules and perform shock analyses on all size weapon modules/zones. This will demonstrate the physical interface and layout of the modules being incorporated into the DDG 51, as well as providing a measure of the ability of the weapon modules to meet ship shock and vibration requirements. The additional funding will not improve the degree of incorporation of SSES in DDG 51. The intent would to reduce the risk associated with Weapon Module introduction in DDG 51.

The Navy supports the President's budget.

MK 92 FIRE CONTROL SYSTEM

QUESTION: The House annually adds funds for the MK 92 Fire Control System upgrade for FFG-7s. Does the Navy support the House add-on for this program?

ANSWER: In order to execute the upgrade program proposed by Sperry Corporation, additional RDT&E funding beyond what is provided in the FY 84 budget is required.

QUESTION: What is the technical and cost status of the Phase III upgrade program?

ANSWER: Navy has received the Sperry proposal for the Phase III development and a contract is expected to be signed in August 1983 after some technical issues are resolved. The contractor proposal stipulated $110 million target/$120 million ceiling cost of developing the phased array radar upgrade through land-based testing. In addition, Government costs of approximately $33 million will be required to fund Navy support and Government furnished equipment. Some performance issues yet to be resolved could result in additional cost of over $30 million.

QUESTION: What is the unit cost of the system, per ship?

ANSWER: The Sperry proposal stated the phased array radar modification would cost $30 million per system in FY 1983 dollars if procured in lots of five.

QUESTION: Wouldn't the MIRS radar be less expensive and better able to meet the threat?

ANSWER: A competitive request for proposal has not been issued on MIRS. However, it is estimated that the development cost would be over $300 million and projected procurement cost would be less than $20 million (FY 83). Navy analysis has projected MIRS to be far more capable against the threat of the 1990's. The measured, competitive development of MIRS, based upon sound technical and operational considerations is a better long term approach for an AAW upgrade to mid-sized combatants.

QUESTION: Does the MK 92 Fire Control System Phase III upgrade support the SM-2 missile?

ANSWER: No. Navy requested a quotation for a firm fixed price contract and received a proposal for fixed price incentive contract. Several items requested by the RFP but not included in the basic Sperry proposal are now the outstanding technical issues in the negotiations. Navy requested a proposal on the Phase III SHIPALT which Sperry stated would not be available until 1984.

QUESTION: Was the Sperry proposal responsive to the Navy RFP?

ANSWER: No. Navy requested a quotation for a firm fixed price contract and received a proposal for fixed price incentive contract. The RFP requested several items, which are the outstanding technical issues, but were not included in the basic proposal. In addition, Navy requested a proposal on the Phase III SHIPALT which Sperry stated would not be available until 1984.

RACER

QUESTION: The Committee received an information paper from the Navy on April 28, 1983 stating that incorporation of the Rankine Cycle Energy Recovery (RACER) system into the lead DDG 51 class ship was not feasible.

Would such a premature installation of RACER have resulted in greater risk, due to its introduction without adequate testing?

ANSWER: The introduction of RACER in the DDG 51 class lead ship would have introduced significantly greater risk because of the necessity of having to make an installation decision prior to any meaningful testing, and prior to any at-sea testing. The risk is to the cost and schedule of that ship.

QUESTION: However, is RACER a viable waste heat recovery concept in the long-term?

ANSWER: RACER appears to be an excellent waste heat recovery concept. A commercial, virtually steady-state, version of RACER is now in operation in a single industrial installation, providing the projected fuel economy. RACER is currently being targetted for introduction in the Second Flight of the DDG 51 class (last FY-88 ship) subsequent to planned Approval for Full Production (AFP) of RACER in late FY-87.

QUESTION: The House Armed Services Committee has directed that $24 million in R&D funding be made available for installation of RACER in the DDG 51. Given the Navy's correspondence to the committee, I would take it that it does not support this action, is that correct?

ANSWER: The Navy has requested $24.6 million for the development and testing of RACER in FY-84. Completion of OPEVAL and Approval for Full Production (AFP) is scheduled for late FY-87. Navy does not support the House Armed Services Committee language which directs that the effort be directed towards incorporation into the lead ship of the DDG 51 class. The production decision for this ship would, of necessity, be required prior to the scheduled AFP.

VLS MODIFICATIONS FOR SSN688s

The committee notes that the FY 1984 budget for the SSN688 Vertical Launch System, is $13.1 million larger than last year's projection for the program. The Navy descriptive summary states that some of these funds will be used for a capsule development for a missile with greater range and/or payload than the TOMAHAWK.

QUESTION: Can these modifications be deferred to FY 1985?

ANSWER: The FY 1984 increase is primarily intended to support fire control system software development cost growth. Development of capsule modifications to support a longer range TOMAHAWK has been deferred. Those funds initially intended for this effort are required to support the baseline capsule development program to correct gas generator design problems.

QUESTION: What is the reason for the budget increase? Will it support equipping the first SSN to have the full complement of VLS equipment, the SSN720?

ANSWER: The increase is due to fire control system software development cost growth ($9.3M) and capsule design efforts needed to incorporate shock test results and to complete correction of technical problems with the gas generator experienced during the initial underwater launch tests. These funds, totaling $13.1M, are urgently needed in FY 1984 to support completion of the baseline program and delivery of the lead VLS ship, SSN720.

QUESTION: Why should we agree to VLS capsule modification efforts when we're having so much turbulence in the TOMAHAWK cruise missile program?

ANSWER: As stated above, current efforts do not include development of capsule modification to implement a longer range TOMAHAWK missile.

QUESTIONS SUBMITTED BY SENATOR WEICKER

SUBMARINE FUNDING

QUESTION: The House Armed Services Committee has recommended a reduction of $73.1 million in the FY-84 TRIDENT Submarine Program. There seems to be general agreement that the Navy has overestimated the cost of the FY-84 TRIDENT Program. Is this true?

ANSWER: Yes.

QUESTION: If so, to what extent is the FY 1984 TRIDENT Program overestimated?

ANSWER: As you know, Navy updates its price estimates as better information is available. The latest pricing effort for TRIDENT has resulted in a decrease of $73.1 million required for the FY 1984 TRIDENT submarine.

QUESTION: The FY-84 shipbuilding program includes a request for advance procurement funds for four nuclear-powered attack submarines (SSN-688) in FY-85. Has the Navy programmed the funding necessary to buy four SSN-688 boats in FY-85?

ANSWER: Yes.

FY 84 SHIPBUILDING PROGRAM

QUESTION: Electric Boat anticipates having some excess capacity in 1984/85 and is hoping to receive some Navy overhaul work at that time. Is the Navy giving consideration to such plan? If so, please discuss those plans.

ANSWER: The Navy is currently planning to have Electric Boat begin repair work on nuclear submarines beginning with the SSN 705 Selected Restricted Availablility (SRA) in FY 85. Based on the results of that work, the Navy may assign additional Selected Restricted Availabilities in FY 86. No submarine overhauls are currently planned for Electric Boat.

QUESTION: The 2100 members of the Marine Draftmen's Association went on strike at Electric Boat on June 9th. What effect, if any, is this strike having on current Navy contracts? If not resolved quickly, how could it affect current contracts? In what way could it affect the FY 84 shipbuilding program?

ANSWER: The effect on current Navy contracts has been minimal. Electric Boat (EB) supervisory and salaried personnel are doing the work normally performed by Marine Draftsmen's Association (MDA) members. If not resolved quickly EB design products required by current contracts could be delivered late unless the company takes additional action. Late delivery of EB design products will force the FY 84 submarine shipbuilding programs to increase their management attention to minimize potential program impact. During the last MDA strike increased management attention did in fact minimize the strike's effect on similar submarine programs. We anticipate the same results will occur if the current strike is not resolved quickly.

LANDING CRAFT, AIR CUSHION (LCAC)

QUESTION: The General Accounting Office has raised some serious questions about the validity of the Landing Craft, Air Cushion (LCAC) competition. Because of this controversy, the House Armed Services Committee has recommended that FY84 appropriations not be obligated until the issue is resolved. When exactly does the Navy expect to resolve the problem? Do any of the possible solutions have the potential of adversely affecting the current engine subcontractor -- AVCO Corporation's Lycoming Division. If so, how?

ANSWER: The last two paragraphs of the General Accounting Office (GAO) decision regarding the RMI, Inc. protest (B-203652) read as follows:

> "Ideally, we would recommend that the Navy reopen the procurement, conduct discussions, and make appropriate selection. However, remedial action may be foreclosed at this time.
>
> Consequently, we are remanding this matter to the Navy and requesting that it determine whether it is feasible at this time to reopen competition."

The Navy believes that the initial GAO decision is erroneous and has requested, as has Bell, that the decision be reconsidered and reversed. GAO is currently reevaluating its initial decision and additional information has been requested from, and provided by, the Navy. Any response to the question "whether it is feasible at this time to reopen competition" would be premature. No action will be taken until GAO rules on the pending requests for reconsideration.

At present, the Navy does not foresee any action which would affect the use of AVCO Lycoming TF-40B engines in the Bell Aerospace LCAC Design. Bell is under contract to construct six (6) LCACs, and six (6) additional craft are proposed in the Navy FY84 budget. These will also be constructed by Bell.

The Landing Craft, Air Cushion (LCAC) construction program is in full progress with roll-out of the first craft scheduled for the spring of 1984.

QUESTIONS SUBMITTED BY SENATOR ANDREWS

NAVY SHIPBUILDING (PUBLIC/PRIVATE OVERHAUL ALLOCATION)

QUESTION: There is concern over the imbalance on the allocation of ship overhauls and conversion between naval shipyards. For FY 84, the Navy estimates that 68 percent of the work will be done in the naval yards, while the rest will be given to the private sector. What do you foresee the impact would be on production and efficiency if the allocation of work were changed to a 60/40 or 50/50 split?

ANSWER: Based on language set forth in the House Armed Services Report of May 11, 1983, the Navy is now reviewing the policy of placing no more than 70% of ship repair and alteration in the public shipyards (the "70/30 split" between public and private). The evaluation will address the impact on production and efficiency on both Navy yards and the private sector if the distribution of work were changed to either a 60/40 or 50/50 split. Copies of the completed evaluation report will be provided to the Senate Appropriations Committee. It should be noted that under the "70/30 split" policy, the percentage of work which has been assigned private has varied between 33.5 and 38.7 from FY 80-FY 83, averaging 35%.

Although the evaluation is ongoing, preliminary indications are that a 50/50 split could result in the deletion of as many as 19 overhauls from the 27 FY 84 naval shipyard overhauls contained in the budget, triggering a reduction in force of approximately 24,000 employees and creating severe nuclear workload problems. Additionally, there would be insufficient time for contract awards for overhauls scheduled to commence in early FY 84. Under a 60/40 split, all nuclear ship overhauls could be accommodated as scheduled, but the number of overhauls deleted from the public shipyards would be 16 of the 27 scheduled in the budget. In summary, it is considered that a 60/40 or 50/50 split would represent an unexecutable FY 84 program since the private sector could not support the quantity of nuclear and complex work that would have to be reassigned. Consequently, certain overhauls would have to be deferred to FY 85 and beyond with a subsequent reduction to fleet readiness.

It is clear that additional funds would be required in FY 1984 for severance and leave pay. Additionally, the cost of the remaining overhauls would increase because, with the relatively short decision time remaining, fixed overhead would have to be spread over a much smaller work base. The amount of additional funds actually required would be dependent upon the decision date.

FY 1984, approximately 3 1/2 months away, would be a year of extreme disruption and inefficiency if the traditional 70/30 ratio were to be changed at this late date.

FY 84 SHIPBUILDING PROGRAM

QUESTION: In the past, the Navy has experience difficulty in qualifying private shipyards and subcontractors to overhaul ships and their subsystems. You are requesting $325 million over last year's appropriation for ship maintenance and modernization. Has the situation improved over last year in the Navy's ability to certify or qualify these private shipyards?

ANSWER: The Navy has made considerable progress in it's ability to certify or qualify private shipyards to overhaul ships and their subsystems. First, we have issued new policy and procedures governing the issuance of Master Ship Repair (MSR) contracts. Secondly, the Navy is putting in place a system which will certify private contractors to conduct Class "B" (return to original specifications) repairs to certain shipboard mission critical equipments. These contractors will be listed on a Qualified Services List (QSL) after their certification. Thirdly, the Navy has implemented a program to identify and qualify, in advance, those private shipyards and companies technically capable of managing combat systems work and conducting combat private sector overhauls of surface combatants.

It should be noted that, allowing for 4.8% inflation, the FY 1984 dollar total is lower than the FY 1983 dollar total for ship depot maintenance and modernization.

QUESTION: GAO reports that progress in developing and maintaining labor standards and better work methods at Naval Shipyards during overhauls, conversions and repairs has been minimal. Can you comment on these allegations?

ANSWER: There has been an ongoing effort to develop and maintain labor standards and improve work methods at the Naval Shipyards. In fiscal year 1982, methods improvements at the above activities resulted in cost avoidances of about $16 million. These improvements have already been factored into our FY84 budget requests.

The Navy does have significant new initiatives underway to enhance the methods and standards program at the Naval Shipyards:

a. Installation of the Defense Productivity Program Office approved Computer Aided Time Standards system (piloted at Philadelphia Naval Shipyard) in all Naval Shipyards within the next two (2) years. This system provides a computer-assisted methodology to retrieve and systematically use standard time data and existing work standards to construct new time standards applicable to the task at hand.

b. Coverage of 60% of the direct labor effort with true engineered standards incorporating all methods improvements within three

(3) years. This will involve the development, improvement and/or validation of more than 10,000 methods and standards.

c. These actions are contingent upon manpower and equipment dollars being provided as currently planned. Resource levels are not expected to be a problem at this point in time; personnel actions are underway at the Naval Sea Systems Command and the Naval Shipyards to provide new management and engineering support staff dedicated full-time to the methods and standards initiatives outlined above.

QUESTIONS SUBMITTED BY SENATOR D'AMATO

NAVY SHIPBUILDING (PUBLIC/PRIVATE OVERHAUL ALLOCATION)

QUESTION: In your view, is the ratio of the dollar value of overhaul and repair work done in public yards to the dollar value of overhaul and repair work done in private yards the best measure of the Navy's economic interaction with private sector shipyards in the ship overhaul and repair business?

ANSWER: There are several "yardsticks" by which the Navy's economic interaction with private sector shipyards in the ship overhaul and repair business can be measured. These indices include a comparison of the number of ships inducted in a given year, man-day comparison of public work as contrasted with that assigned to private yards or actual dollar value within the total depot maintenance requirement. Although each index has certain inherent deficiencies, the ratio of the dollar value of overhaul and repair work assigned/accomplished in public yards vis-a-vis private yards is considered the best single measure of the Navy's economic interaction with the private sector through its ship maintenance and modernization program.

QUESTION: What is the ratio of the number of overhaul or repair contracts awarded to private yards to the number of overhaul or repair contracts awarded to public yards for fiscal year 1982? For fiscal year 1983 to date? Planned for fiscal year 1984? Planned for fiscal year 1985?

ANSWER: A ratio established solely upon the number of overhaul or repair contracts awarded to public and private yards would be misleading. In order to compare contracts, one against another, there must be an awareness of the wide range of costs; e.g., the cost for a small minesweeper versus that of an aircraft carrier. When considering overhauls, selected restricted availabilities, service craft repairs, restricted availabilities and emergent repairs, the total number of contracts is extremely large. With the majority of small/lessor contracts awarded to the private sector, a ratio based only on numbers of contracts would in most instances be incorrectly distorted in their direction. Thus, a dollar value remains the best measure to determine the Navy's interaction with the private sector concerning ship overhaul and repair business.

Ratios based on dollar value of depot level work is as follows:

Fiscal Year	Public	Private
1982	61%	39%
1983	66%	34%
1984	68%	32%
1985	Planning still in progress	

Present FY 1985 planning indicates that the private sector share of depot level work should increase somewhat over that of FY 1984, however, a precise percentage factor is not yet available.

QUESTION: For fiscal years 1982 and 1983 to date, how many separate private yards have received Navy ship overhaul or repair contracts?

ANSWER: During FY 1982, 50 private shipyards and during FY 1983 (to date) 33 private shipyards have received ship overhaul contracts.

QUESTION: How important is it to the Navy to sustain a full range of ship overhaul and repair capabilities in its public shipyards?

ANSWER: It is critical to the Navy's long-term fleet readiness. The CNO by long-standing policy has deemed it essential to maintain eight naval shipyards. These eight naval shipyards have been assigned specific strategic and operations industriial capabilities as follows:

	SHIPYARDS
1. Two shipyards on each coast capable of repairing aircraft carriers.	Puget Sound, Long Beach, Philadelphia, Norfolk.
2. One shipyard on each coast capable of repairing surface nuclear ships.	Puget Sound, Norfolk.
3. Three shipyards on each coast capable of repairing nuclear submarines.	Puget Sound, Mare Island, Pearl Harbor, Portsmouth, Norfolk, Charleston.
4. Three shipyards on each coast capable of installing, maintaining and checking out sophisticated electronics and Missile Weapons Systems.	Philadelphia, Norfolk, Charleston, Puget Sound Long Beach, Pearl Harbor.
5. Pearl Harbor Naval Shipyard shall be capable of emergency repairs of all Pacific ships and shall normally perform overhauls on ships homeported in its vicinity.	Pearl Harbor.

Six public shipyards are qualified to overhaul nuclear powered ships - Charleston, Norfolk, Portsmouth, Mare Island, Puget Sound and Pearl Harbor. The Navy has committed a major expenditure of funds and many years to this effort, and these six yards are absolutely essential to support the growing nuclear fleet.

The naval shipyard system is exceedingly important to the national defense for the following reasons:

1. Provide a responsible, geographically dispersed, strike free industrial capability in support of fleet readiness.
2. Ensure a controlled ready work force to support changing operational commitments and emergent work.
3. Ensure sustained support of highly complex and classified workloads.
4. Maintain immediate capability to repair battle damage rapidly for all classes of naval ships.
5. Provide an immediate mobilization industrial base for rapid expansion to support combat operations.

6. Maintenance of a number of shipyards sufficient so that damage or destruction of one shipyard does not totally eliminate a capability.

QUESTION: If a portion of the high dollar value overhauls were awarded to private sector yards to bring the dollar value ratio between private and public yards more closely into balance, would the Navy be able to sustain a complete spectrum of overhaul and repair capabilities in the public yards?

ANSWER: If the Navy were to be directed to schedule a portion of the high value overhauls to the private sector to split the dollar value equally between the private and public shipyards, the Navy would be unable to execute the Navy ship overhaul program. Nuclear and other highly complex ship repair work would have to be deferred solely to reduce the Navy portion of the dollar value as the private sector does not have the capability to accommodate this ship repair work. This would have an immediate detrimental effect on fleet readiness which would be further compounded if the policy were to be continued beyond FY 84.

The naval shipyard system would lose significant capacity and capability. A complete spectrum of overhaul and repair capabilities could not be maintained in the naval shipyard system. At a minimum, a 50/50 split is projected to have the following impact if implemented in FY 1984:

a. Closure of Long Beach Naval Shipyard in FY 84.

b. Closure of Philadelphia Naval Shipyard in FY 85.

c. Significant reduction in size of Pearl Harbor Naval Shipyard in FY 84.

d. Significant loss of complex naval ship combat systems repair infra-structure.

e. A substantial reduction in the capability of the naval shipyard system to respond to national emergencies and the inability of the naval shipyard system to meet the CNO established strategic requirements.

f. Ship repair costs would be increased substantially due to inefficient workloading of the naval shipyards and the introduction of more complex shipwork into the private sector than can be accommodated with present availability and experience.

QUESTION: Please provide a list of the private yards which, in your view, would be most likely to develop a capability to perform overhaul and repair work on the high dollar value vessels which are presently reserved for public yards, if the Navy were to be directed to equalize the dollar value ratio by opening these jobs to public bid.

ANSWER: Although there would most likely be some private yards which could either expand a present capability or develop the capability to perform overhaul and repair work on high dollar value ships now assigned to Navy yards, such a list would be based largely on speculation. Individual shipyard business decisions can only be made by the companies themselves, and the Navy does not by policy speak to internal business affairs.

QUESTION: Because of the limited number of high dollar value jobs, only a few private yards could win these contracts in any given year. If the public yards were to lose their expertise in certain specialized tasks peculiar to these high dollar value jobs, would the Navy feel that as a matter of national security, it would have to sustain the private yards which would be the only remaining repositories of the technical capabilities needed to perform these specialized tasks?

ANSWER: In order to maintain the required CNO strategic capabilities, the present framework of public yards must be continued. The facility and training resource investments required to have the capability to overhaul and repair nuclear and other highly complex ships is substantial. Relatively few private shipyards in this country have made appreciable resource investments, and those that have, did so primarily on the strength of new construction business, not repair. It is difficult to envision a marked increase in private sector repair capability faced with the large investments required, the highly competitive nature of the business, and the continuing decrease in commercial ship new construction and repair work.

QUESTION: In your view, if the emphasis were placed on equalizing the dollar value ratio between the public and private yards, would there be a danger of certain large private yards attaining a dominant economic position analogous to the position certain yards hold in ship construction?

ANSWER: Yes. Because of the capital and training investment required to obtain and sustain specialized plant equipment and skills required for the repair of Navy complex ships, it is very probable that certain private shipyards would obtain a dominant position in the ship repair industry if the dollar value ratio between the public and private yards was to be equalized.

QUESTION: In light of the Navy's experience with contract claims, delivery slippages, and quality control deficiencies involving certain yards which hold dominant positions in certain ship construction fields, in your view, would it be in the national interest to allow a similar oligopoly or monopoly market situation to develop in high dollar value ship overhaul and repair work?

ANSWER: The Navy's experience would indicate that it would definitely not be in the best interest of the nation or the Navy to allow a single company or a limited number of companies to monopolize the high dollar value ship overhaul and repair work. However, if additional nuclear shipwork had to be assigned to the private sector, it would be in the best interests of the Navy to only consider one or two additional private yards, since few private yards would be willing to commit the resources and time necessary.

QUESTION: Last year, the Navy changed its policy on the ratios of its ship overhaul and repair work which would be shared between homeport areas, nearby yards, and yards along the coast on which the ship was homeported. Please explain the impact of the change in policy as you are able to assess it at this point, in terms of the private yards involved, the associated savings or costs to the Navy, and Navy personnel and their families.

ANSWER: The impact on the private yards involved in the Navy policy to bid 1/3 of the contracts in homeport and 2/3 of the contracts coast wide on private shipyard work has been minimal to date. It should be noted that the policy applies to solicitation procedures for private sector overhauls. An increase in the experience base is required before a valid measurement of impact can be determined.

SURFACE ACTION GROUP HOMEPORTING

QUESTION: On what date will the Navy announce its decision regarding the selection of a homeport for the Surface Action Group?

ANSWER: The Northeast Homeport Study Team will complete its Surface Action Group homeporting proposals for the New York City, Boston and Narragansett Bay areas this summer. Results will be submitted to the Secretary of the Navy for a decision later this summer.

QUESTION: How much weight will the Navy place on the existence of a viable ship overhaul and repair capability in the candidate ports in making its decision on Surface Action Group homeport selection?

ANSWER: Some of the major considerations for implementing the strategic dispersal concept are availability of support requirements, engineering, and environmental assessments, community support and financial feasibility. The excellent ship repair and overhaul capabilities in the Boston and New York City areas made the northeast attractive for potential Surface Action Group homeporting.

QUESTIONS SUBMITTED BY SENATOR STENNIS

DDG 51 CAPABILITY

QUESTION: Comment a bit more on the capability which the ARLEIGH BURKE, DDG 51 Class will provide the Navy.

ANSWER: ARLEIGH BURKE is a general-purpose guided missile destroyer designed for multi-warfare tasks which require Anti-Air Warfare, Strike Warfare, Anti-Submarine Warfare and Anti-Surface Warfare.

She will complement the proven CG 47 in defending the Carrier Battle Groups. She will operate offensively with Surface Action Groups and can be deployed as lead combatant in support of Replenishment and Amphibious Groups.

ARLEIGH BURKE will be equipped with the AEGIS Weapon System, which includes an AN/SPY-1D multi-function radar. Four fixed arrays provide 360 degree coverage, while three illuminators control the terminal engagement phase of the ship's vertically launched STANDARD Surface-to-Air Missiles (SM-2). The Vertical Launching System MK-41 accommodates both STANDARD and TOMAHAWK Missiles. Self-defense includes the AN/SLQ-32 Electronic Warfare system and decoy launchers in addition to the PHALANX Weapon System.

Anti-Submarine Warfare will be conducted with the long range tactical towed array integrated with the active hull-mounted AN/SQS-53C sonar system. The ship can land, launch and control LAMPS MK-III ASW helicopters. Two deck-mounted torpedo launchers and vertically launched Anti-Submarine Rocket provide ASW firepower.

Long range Strike and Anti-Surface Warfare capabilities are provided by vertically launched TOMAHAWK and cannister launched HARPOON Missiles. Semi-Active Laser Guided Projectile enhance Naval gunfire support and close-in surface engagements.

Simultaneous, autonomous operation of warfare areas is possible through architecture centered around AN/UYK-43B Computers.

ARLEIGH BURKE's hull is somewhat shorter in length, but broader in beam than TICONDEROGA's. This enhances sea-keeping, allowing her to sustain high speeds in rough seas. Her broader beam provides space below decks for protected installation of critical combat system equipment. The combat information center, radio central and magazines are armored and located below decks. Her design includes the Collective Protection System, which also enhances survivability in a chemical or biological attack.

DDG 51's propulsion system is nearly identical to that in the CG 47 Class Cruisers. Four LM 2500 gas turbines and two controllable and reversible pitch propellers drive the ship at speeds in excess of 30 knots.

ARLEIGH BURKE is well armed for her size, and survivable. She is designed to meet the threat into the next century. She will replace destroyers built in the 1960's, which are rapidly becoming obsolete.

QUESTION: Isn't it essential that we move on this destroyer at this time as the DDG 2 and DDG 37 Class ships are rapidly becoming obsolete?

ANSWER: Yes. Within surface combatant force levels, the most serious problem facing the Navy is replacing those guided missile ships which must be retired by the early 1990's. The production profile developed provides serial production to keep pace with retirements of the DDG 2 and DDG 37 Classes. ARLEIGH BURKE will not be war ready until 1989. For this reason, authorization of DDG 51 in FY-1985 is critical. Any delay in this authorization would:

(1) delay replacing worn out, retiring 1960's-technology destroyers. These destroyers cannot deal with today's threat.

(2) increase cost, both for building DDG 51's and for attempts to extend the lives of the older destroyers.

NUCLEAR ATTACK SUBMARINE

QUESTION: Your statement refers to the minimum force level objective of 100 nuclear attack submarines. How many does the Navy have in the Fleet at the present time, and when do you project the Navy will have the minimum force level objective available?

ANSWER: The Navy presently has 90 deployable nuclear attack submarines and expects to reach the mid-range force level goal of 100 in FY 1990.

DIESEL SUBMARINES

QUESTION: Several advocates have proposed the addition of diesel-electric submarines to our submarine fleet. They are certainly less expensive and use fewer personnel and are reported to be excellent for certain missions. What are your views regarding their capability?

ANSWER: At the request of Congress, in both 1981 and 1982, the Navy conducted detailed evaluations of the diesel-electric submarine's potential for contributing to the overall effectiveness of our submarine force. These in-depth studies concluded

- After a force level of 115 SSNs is achieved, and under the assumption that a need for a fixed ASW barrier assignment exists throughout a conflict, a mixed force of SSNs and SSs provides a procurement cost savings and marginal life cycle cost advantage over an all SSN force if forward basing is available. If under the same conditions, forward basing is not available, the mixed force provides a marginal procurement cost savings and no life cycle cost savings.
- Under the assumption that submarines initially assigned to fixed barrier missions must also be used to react to a changing situation and fill gaps caused by attrition, there is a significant cost advantage to all SSN forces, even ones composed of more than 115 SSNs.
- The study's number of 115 SSNs was determined by considering a representative distribution of nuclear attack submarines and substituting diesel-electric submarines in fixed-barrier stations where the air threat was not significant and where ice coverage did not preclude snorkel operations. Should the air threat prove more significant than assumed in the study, then additional SSNs and fewer SSs would be required. Consequently, 115 SSNs represents the absolute minimum SSN force that would be considered acceptable before it would be even marginally worthwhile to begin construction of diesel-electric submarines even under conditions most favorable to their employment.
- Thorough evaluation of the West German Thyssen TR 1700 and HDW T2000 diesel-electric submarine designs by a team of Naval officers and submarine design engineers concluded that neither of them could satisfy U.S. requirements without extensive modifications which would have a substantial impact on the size, cost and construction period of those submarines. These modifications would also necessitate the transfer of an extraordinary amount of engineering, development and design technology. The transfer of this information would eliminate exclusive U.S. control of the advanced submarine silencing technology that currently provides much of the advantage U.S. nuclear attack submarines have over other nations.
- No other current SS of foreign design would be suitable for use by the U.S. Navy without similar extensive design modifications.
- The U.S. baseline SS feasibility design developed for the study, SS-X, cannot replace a modern nuclear submarine on a one-for-one basis even in the fixed barrier ASW mission; the one best suited to its limited capabilities. In all other missions, the SS-X was substantially less capable.

Our global strategy and the fact that our force level goals are well short of those considered necessary for a reasonable assurance of success dictate that we employ our limited submarine force flexibly. We must have the mobility, stamina and combat potential to respond on short notice to crises or conflicts virtually around the globe. The diesel-electric submarine does not provide this ability and consequently does not add to our overall force capability.

The studies concluded that a mixed force provides only a marginal cost savings, if any, after achieving a force level of at least 115 SSNs and then only in the static barrier case with forward basing. If forward basing were available, then clearly our allies, who have upwards of 140 diesel-electric submarines, would be able to contribute by operating these submarines in critical chokepoints near their homelands and in defense of their coastal waters.

In view of the growth of the Soviet submarine force and the qualitative improvements in their submarines, it is imperative that we invest our available resources where they can most effectively enhance our maritime strategy. Having carefully examined the relevant factors, the Navy has concluded that procurement of diesel-electric submarines would not be cost effective in adding to or maintaining the overall capabilities of the U.S. submarine force.

SUBMARINE QUIETING

QUESTION: The Soviet Union has been working for a number of years to make their submarines less noisy and more difficult to detect. Is the Navy working on advanced programs to counter the Soviet advances?

ANSWER: U.S. Attack submarines presently have an acoustic advantage over Soviet submarines. We can hear his submarines before he can hear ours, but the Soviets are clearly improving in their ability to build quieter submarines. To maintain the competitive edge so necessary in light of superior Soviet numbers, we are continuing to improve the 688 class submarines and designing a new SSN. One major program that will be used on both the 688 class and the new design is the Submarine Advanced Combat System (SUBACS) which will incorporate new sensor and computer processing capabilities. This advanced combat system is greatly reduced in size yet when coupled with new sonars such as the wide aperture array, has significantly enhanced capabilities. Other planned improvements to the 688 class will reduce the ship noise levels and sonar target strength.

As we look to the future, it is clear that we are close to the point where additional advancements to further improve 688 class performance will not be feasible due to design, weight and space limitations. The projected threat of the future requires a new design SSN. This new design will incorporate state-of-the-art submarine technology to insure that we maintain an acoustic advantage into the next century.

LAMPS MK I

QUESTION: LAMPS is the only weapon system with sufficient range to neutralize enemy submarines prior to their delivering weapons against our surface ships. Isn't it true that a large number of our surface vessels are equipped with the LAMPS MK I system electronics, but we do not have adequate helicopter assets to station aboard the ships?

ANSWER: Presently, there exists a shortage of LAMPS MK I aircraft resulting in some of our less capable ASW ships not being assigned aircraft even though they have been outfitted with LAMPS MK I electronic systems. This situation is expected to continue into the late 1980's.

LAMPS MK I

QUESTION: What number of ships are we speaking of that have the LAMPS MK I sensor suites but are not equipped with helicopter assets?

ANSWER: The number of ships equipped with LAMPS MK I ASW sensor suites but which are/will be without LAMPS MK I aircraft are:

	FY 83	FY 84	FY 85
Ships without aircraft (-)	(D)	(D)	(D)

LAMPS MK III

QUESTION: There is a request for 12 SEASPRITE helicopters which support the LAMPS MK I system in the fiscal year 1984 budget. The House Armed Services Committee has recommended termination of this procurement. What are your thoughts about the existing shortfall of ASW helicopter assets and the termination of this requested procurement?

ANSWER: Failure to procure the twelve (12) SH-2F aircraft requested in FY 84 will prevent the planned standup of a third Reserve SH-2F squadron to provide LAMPS MK I aircraft to Reserve FF1052/FFG-7 frigates. Active squadron surge mobilization readiness will be markedly reduced, and active fleet assets will be severely stretched during the planned SH-2F Service Life Extension Program. Any attrition after FY 90 will result in force level reductions. The early termination of SH-2F production will, in all probability, perpetuate past unsatisfactory levels of aircraft available to deploy on the large number of frigates with over a decade of useful ship life remaining.

NUCLEAR CARRIER PROGRAM

QUESTION: In the five-year plan supporting the fiscal year 1984 defense budget, there was an additional nuclear carrier programmed in fiscal year 1988. It is my understanding that this has now been deleted. Why is this?

ANSWER: The five year shipbuilding plan that was submitted in support of the FY-84 defense budget does include a CVN in FY-88. This ship was included in the plan in the event that the USS MIDWAY could not be extended to a fifty year life. We now know that MIDWAY can remain active through the 90s. Construction of another CVN beyond CVN 73 need not therefore begin until the early 90s.

QUESTION: Will this affect your plans to deploy a 15-carrier battle group?

ANSWER: We will achieve our goal of 15 deployable carriers in FY 1990 and maintain that level throughout the remainder of the century without construction of a CVN beginning in FY 1988.

STRATEGIC SEALIFT CAPABILITY

QUESTION: Assistant Secretary Sawyer and General Thompson have testified that we still face a significant shortfall in the surge strategic sealift capability. It is understood that this capability is urgently required for mechanized Army Divisions. What are your plans for satisfying this requirement?

ANSWER: While not complete, the sealift study is not expected to show significant shortfalls and we expect that those shortfalls will be in availability rather than capability. Shortfalls in capability are being met by bringing militarily useful shipping under our control in the RRF. The SL-7 program provides additional capability. In addition, we are dependent upon a viable U.S.-Flag Fleet. Should recent declining trends persist (where merchant tonnage is being laid-up), our capability may not be as adequate as had been forecast in the DOD Sealift Study. Thus, not only is execution of our sealift program essential, but measures must be undertaken to preserve U.S.-Flag capability. We continue to work with the Army to solve sealift problems that are identified.

QUESTION: We understand that some RO/RO ships previously considered for the TAKX may still be available to fill the strategic mobility role. Would these ships be militarily useful if minor modifications were made? How long would it take to initiate a procurement/conversion program?

ANSWER: There were approximately thirty (30) RO/RO ships, of which about one-third are foreign, considered for the TAKX program which may still be commercially available. With varying degrees of modification, all of these ships would be militarily useful; however, the cost-effectiveness of such modifications is unknown. Actions required to guarantee the availability of these ships as well as information on how long they will be available is also unknown, since information gained during the solicitation for the TAKX program was to fulfill a specific sealift requirement, and presently there are no sealift acquisitions under solicitation or planned for solicitation. The only way to guarantee the availability of these ships for sealift is purchase or charter. Subsequent to congressional authorization, a competitive RFP and ship selection could be accomplished in a year. Additional time required for modification after contract award would be dependent upon ships selected and lead time for particular equipment. For example, cranes would require up to 20 months for procurement. Generally, from authorization to delivery of the first vessel would be about three years.

QUESTION: What are your recommendations to correct the problem of strategic mobility shortfall in the shortest time?

ANSWER: Reports of shortages in strategic sealift are directly related to whatever scenario might be used and what or how a particular capability is defined. Some problems will undoubtedly emerge from our sealift study, however, specific solutions will have to await a specific determination of the nature and magnitude of the problem.

PRE-POSITIONED SHIPS

QUESTION: Would you discuss our sealift mobility plan for supplying the Rapid Deployment Force. Where are the prepositioned ships located, and where will the fast resupply ships be berthed? Will both these ships be loaded with equipment -- ready to move if the requirement dictates?

ANSWER: The Rapid Deployment Force, now U. S. Central Command will be supplied in a number of ways. The Navy has the capability to provide full replenishment of all our combatant ships while at sea via connected or vertical replenishment techniques. The MSC

Controlled or Nucleus Fleet provides additional capability for resupply. Should mobilization be required, we have the Ready Reserve Force, the U. S. Flag Fleet, and the National Defense Reserve Fleet which we can call upon. The SL-7's will soon be available for fast surge sealift. The TAKX program will provide globally pre-positioned materials to support simultaneous or sequential introduction of Marine Amphibious Brigades and our Near Term Pre-positioning Force, already pre-positioned at Diego Garcia, gives us a substantial capability. The NTPF is currently the only maritime pre-positioning but we will have three MPS brigades entering service in FY's-84, 85, and 86. Specific sites for two of the MABs are currently under study. The third will replace a portion of the NTPF as scheduled. The fast resupply ships, the SL-7s, will be berthed in CONUS near ports of embarkation for rapid surge to a contingency area. SL-7s will not be pre-loaded.

SUBCOMMITTEE RECESS

The subcommittee will be recessed at the call of the Chair.

[Whereupon, at 11 a.m., Wednesday, June 15, the subcommittee was recessed, to reconvene at the call of the Chair.]

DEPARTMENT OF DEFENSE APPROPRIATIONS FOR FISCAL YEAR 1984

THURSDAY, JUNE 16, 1983

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, D.C.

The subcommittee met at 10:35 a.m., in room SD-138, Dirksen Senate Office Building, Hon. Ted Stevens (chairman) presiding.

Present: Senators Stevens and D'Amato.

DEPARTMENT OF DEFENSE

UNDER SECRETARY OF DEFENSE FOR RESEARCH AND ENGINEERING

STATEMENT OF HON. RICHARD D. DeLAUER, UNDER SECRETARY OF DEFENSE FOR RESEARCH AND ENGINEERING

ACCOMPANIED BY;

- **HON. JAMES P. WADE, PRINCIPAL DEPUTY UNDER SECRETARY OF DEFENSE FOR RESEARCH AND ENGINEERING;**
- **DONALD C. LATHAM, DEPUTY UNDER SECRETARY OF DEFENSE (COMMAND, CONTROL COMMUNICATIONS AND INTELLIGENCE), OFFICE OF THE UNDER SECRETARY OF DEFENSE FOR RESEARCH AND ENGINEERING;**
- **DR. MAC C. ADAMS, DEPUTY UNDER SECRETARY OF DEFENSE (TACTICAL WARFARE PROGRAMS), OFFICE OF THE UNDER SECRETARY OF DEFENSE FOR RESEARCH AND ENGINEERING;**
- **HON. JAY R. SCULLEY, ASSISTANT SECRETARY OF THE ARMY (RESEARCH, DEVELOPMENT AND ACQUISITION);**
- **HON. MELVYN R. PAISLEY, ASSISTANT SECRETARY OF THE NAVY (RESEARCH, ENGINEERING AND SYSTEMS);**
- **HON. THOMAS E. COOPER, ASSISTANT SECRETARY OF THE AIR FORCE (RESEARCH, DEVELOPMENT AND LOGISTICS)**

JOINT SERVICES PROGRAM

OPENING STATEMENT OF SENATOR STEVENS

Senator STEVENS. Good morning. My apologies. We have a full committee meeting going on on the public works bill. I am sorry for the delay.

We are pleased to see you here, Dr. DeLauer, and all of your first team. We are here to conduct a review of the Department's request for the research and development and procurement funding for a number of joint services programs for the fiscal year 1984.

This subcommittee has generally been supportive of the joint services programs concept, since we believe it can help save research and development dollars, increase systems commonality, and avoid unnecessary program duplication. However, the track record thus far has been less than impressive. Some would argue that the cost involved in developing weapons acceptable to more than one service may wipe out any of the savings.

Some recent examples of this lack of accord in joint programs can be seen in the 9 millimeter handgun, the HARM and JVX programs, the triservice practical communications program, the light antiarmor weapons, just to name a few. We want to explore a few of those this morning.

As I said, I am glad to see you here, Dick, Dr. Wade, Mr. Latham. We have your prepared statements for the record. We would like for you to give us a summary.

There will be others on their way over here soon. Unfortunately, the bell means a vote is on, but we will try to move along. I understand you do have a timeframe problem at noon.

Dr. **DeLauer**. I do, but Jim and Don Latham can stay for the OSD. I do not know what time constraints the services have.

Senator **Stevens**. Could you pull the mike to you.

Dr. **DeLauer**. We will continue to answer questions. I just have to leave by noon.

Senator **Stevens**. All right.

DESCRIPTION OF JOINT PROGRAM

Dr. **DeLauer**. Thank you, Mr. Chairman.

As you pointed out, we do have the people our Office works with on these joint acquisitions programs here with us at the table. Each represents the acquisition side of the secretariats of each of the services, and they are available for responding to any particular questions in their areas.

I will make the one statement, summarize it for you, and then open it for your questions. You have my statement and I think it is important for the record that we try to define what we term a joint program. In our usage, a joint acquisition program is one in which two or more military services have agreed there exists a sufficient degree of similarity in operational requirements so that a single hardware development program could satisfy them.

In a joint program, the services may either cooperate from the very start in the development of that particular product or they may monitor it as one service develops it and then put their requirements in for the utilization of it after it is through the development phase. I can give you examples during the questioning if you would like.

It is an exceptional case where the identical piece of hardware matches exactly what each of the services needs. Just the environmental aspects of the three services in many cases requires some modification.

INTRODUCTION OF JOINT PROGRAMS

Let me recap the ways a joint program can come about, because I think it is important. Traditionally, the requirements of a service are shaped by its doctrine, that is, the body of principles governing its organization, operations, training, and integration of its force and equipment.

To remain an effective fighting force, each service continually analyzes the threat, the present capabilities, and articulates the shortcomings. Identified shortcomings are then overcome by changes, either in doctrine, tactics or materiel.

Now, each of those three things get modified over a period of time in a greater or lesser degree. Materiel has more changes than tactics, doctrine, or organizational structure.

When change in any of these combinations are necessary to meet the threat, if a materiel change is indicated, the initiating service draws up a requirement document, it is then commented on by the other services, and then the Office of the Secretary of Defense, my Office, also comments. Then we question whether or not another service has a similar need and if it does we indicate they should start a joint service acquisition program.

Under this method, we have obtained some notable successes in conventional ammunition, portable power sources, certain communications, and similar support activities. I have in my statement some details with regard to a couple of examples. I will not bother to read them here. We will get to them when we turn to questions.

While the traditional approach to starting joint programs works quite well with low-profile nuts and bolts support activities, the greater difficulty seems to arise when you increase the high-visibility, more sophisticated, more glamorous programs that in some way touch upon the traditional service roles and missions. It is here we see the conflict between opportunities afforded by emerging technology and the traditional ways of deriving and satisfying military requirements.

For instance, modern guided munitions technology promises weapons with incredible accuracy, a capability that you would think would be equally advantageous to all services. And yet, we are having a terrible time agreeing on a common acquisition program for some of these modern munitions.

RADAR TECHNOLOGY

Similarly, modern radar technology enables us to see, track, and guide weapons toward moving targets well beyond enemy lines. Again, the capability seems to be appropriate for both the Army and the Air Force. Yet the traditional mode failed to produce a common radar program.

I think, when I first came into the job I testified before this committee and referred to the "radar-of-the-month club." It was about the same time the Congress canceled the SOTAS program, which was an Army surveillance and moving target acquisition radar. Every time I got briefing on the program I found another radar buried in the system.

We have been able to reduce that proliferation. It has not been easy. As a consequence, we have agreed to a joint surveillance and target attack radar system, JSTARS, which is in the present budgeting request. In this case, this was an OSD directed program and it has been met with a certain amount of sarcasm and cynicism by the services.

But on the other hand, through extraordinary management techniques, such as threatening to keep management of the program in OSD, we have been able to get the services to see that the lesser of two evils is cooperation, and I think we are finally making progress in that program.

INTERDICTION

An area that is now a new initiative is the whole question of interdiction, how you handle the interdiction role, particularly in the Western Europe scenario. We are in the process of evaluating that program, which includes the JSTARS radar surveillance system as well as a joint tactical missile program called JTACMS. These programs are also in the budget, but I will not go into detail on them. In my statement there is some detail on them.

Senator STEVENS. Let me go vote. I will be back. Senator Rudman may resume if he returns before I do.

[Recess.]

BENEFITS FROM JOINT PROGRAMS

Senator D'AMATO. Will you continue, Dr. DeLauer.

Dr. DELAUER. Thank you, Senator. I had gotten to the point in my statement where I described the particular types of joint programs, and now let me give you a brief summary of the benefits. In most cases, the benefit of a joint program is the saving that accrues from a cooperative hardware development and procurement, program which eliminates two or more separate single-service programs and reduces procurement costs by economies of scale.

The savings realized in procurement most significantly and typically result from production. Once the production base has been established attainment of more economic production rates and second sourcing alternatives are clearly evident saving actions.

Equally appealing is the prospect of even greater savings in the years to come while the products of these joint services programs remain in the active inventory. These savings are in operational support costs.

Any simplification of the support and logistics structure produces considerable savings over a long period of time. It is not the goal of a joint program to produce either a single solution to the threat or to clone a single system for all the services to do a particular job. Rather, our goal is to use as many common components as is efficent and prudent under the circumstances.

I think the notable example of such a program is the cruise missile program, where we have used it differently. ALCM is one, Tomahawk is another, and there are different versions of Tomahawk. And yet, the subsystems are bought from a single jointly staffed, but Navy-managed, program.

IMPLEMENTATION PROBLEMS OF JOINT PROGRAMS

Although the notion of joint programs frequently appears attractive in theory, its implementation often presents problems. Perhaps the biggest hurdle to a joint program is the achievement of an interservice agreement on joint requirements in sufficient detail to implement a single hardware program. Differences in individual service doctrines, tactics, training, and logistics procedures tend to diversify the system design.

A classic example of that is how we started out with Army's Copperhead and the Navy's 5-inch guided projectile. Over a period of time the program configurations diverged from similarity to such a degree that today they really are separate programs, although they are based upon the same technology.

Once the services have established the fundamental requirements, the OSD's role is to provide the leadership which facilitates the executor of the program and to monitor the performance of the program against mutually agreed upon requirements. Our leadership role in OSD is often demanding in that it must be exercised with the utmost finesse.

And as an example of that is that I have the three Assistant Secretaries from the services here today. That was handled with utmost finesse to get them here, and I want the record to show that they support joint programs. Nod. Nod. Nod. [Laughter.]

COOPERATION NECESSARY FOR SUCCESSFUL JOINT PROGRAMS

So, Senator, we have on the record the joint services' support for joint programs. A brute force approach has never succeeded. A notable example of that is, when the Secretary of Defense some years ago had a program called the F-111. Enough said.

A spirit of cooperation must be in evidence on the part of all participants in the joint service program at all times or things really come apart.

I have found that an interservice oversight group, composed of senior service and OSD executives, can be of some value in keeping a joint program intact, on schedule, and ensuring the essential requirements of all participants are met. However, the real way this is handled in primarily in the resource allocation process that goes on each summer in the Department of Defense Resources Board, of which the Deputy Secretary is Chairman. It is at that time that these joint programs are reviewed first for their importance, and second for adequate funding.

A particular service may, in their submission of their program objective memorandum and the request for budget of that particular year, decide that they do not want to continue, or do not want to participate under a joint program. That issue is raised to the DRB at that time and a decision made as to whether or not the joint program will continue and be supported by those services who should support it and by the Office of the Secretary of Defense. So it is the resource allocation process that provides the oversight.

DEFENSE SCIENCE BOARD SUMMER STUDY

Recognizing the need for joint programs and the difficulties in their execution, I have requested a Defense Science Board summer study this year to investigate whether or not our procedures and practices are proper to increase the success rate of joint service programs. Retired Adm. Ike Kidd is the chairman of that summer study. Since the last job he had with the Navy was Chief of Naval Materiel I believe, he is very experienced in this area. By early fall we should have his report on what we need to change in the way we do business to make joint programs have a higher degree of success.

I want to elicit your support for our joint programs in the 1984 budget. You know which ones they are, and with that I will close, Mr. Chairman, and let you ask the questions.

[The prepared statement of Dr. LeLauer follows:]

PREPARED STATEMENT OF DR. RICHARD D. DELAUER

UNDER SECRETARY OF DEFENSE FOR RESEARCH AND ENGINEERING

Mr. Chairman, Members of the Committee. Thank you for giving me the opportunity this morning to appear before you and present my views on the subject of joint acquisition programs in the Department of Defense. Before we proceed too far, allow me to define the term "joint program". In our usage, a joint acquisition program is one about which two or more Military Services have agreed that there exists a sufficient degree of similarity in the operational requirement so that it can be satisfied by a single hardware development and acquisition program. In a joint program, the Services may either cooperate from the very start of the hardware development or they may join together after or during the development phase to procure alike or versions of substantially alike hardware to satisfy the common military need. While identical systems are the exception, a high degree of component commonality is often achieved.

Let me recount the principal ways of how a joint program comes about. Traditionally, the requirements of a Service are shaped by its doctrine - that body of principles governing its organization, operations, training and the integration of its forces and equipment. To remain an effective fighting force, each Service continuously analyzes the threat, analyzes its own present capabilities and articulates shortcomings. Identified shortcomings are then overcome by changes in either doctrine, tactics or materiel. At times changes in all or any combination of these are necessary to meet the threat. If a materiel solution is indicated, the initiating Service drafts a requirements document which is then commented upon by the other Services, the Office of the Secretary of Defense (OSD) and others. Should another Service have a similar need, it may at that time so indicate and open a dialog for the formation of a joint acquisition program to solve the problem.

Under this traditional method we have attained some notable joint program successes in such areas as conventional ammunition, portable power sources, communications, and the like. Let me illustrate with as an example of an early joint effort called the Mobile Electric Power Project (MEPP). This project goes back to the days of Vietnam, when large numbers of portable motor-generator sets were in use to power the many installations and equipment in the field. Many of these generating systems were unreliable and their parts were not interchangeable. Under rather intense high-level pressure to harmonize interservice requirements, a most noteworthy achievement has been accomplished:

- The close to 2,000 different makes and models of this kind of power generating equipment has now been reduced to approximately 40.
- Once there were some 800 different specifications for existing equipments; now there are only seven.
- For power generating equipment in the 60 to 200 kilowatt category, the parts count was cut from over 13,000 to 2,000. That represents 11,000 less items to be stored, handled, tracked and procured by our logistics system.
- The number of technical manuals has been reduced from 4,000 to approximately 1,000. Our goal is an order of magnitude additional reduction - to less than 100.

While the traditional approach to starting joint programs works quite well with low-profile "nuts and bolts" type of acquisitions, it seems to present much greater difficulty when applied to the higher-visibility, more glamorous programs that touch upon the traditional Service roles and missions. It is here that we seem to confront the conflict between opportunities afforded by emerging technology and the traditional ways of deriving and satisfying military requirements.

For instance, modern guided munitions technology promises weapons of incredible accuracies, a capability, it would seem, equally advantageous to all Services. Yet, we cannot agree on a common acquisition program. Similarly, modern radar technology enables us to see, track and guide weapons toward moving targets deep behind the enemy's lines. Again, a capability which would seem appropriate to both the Army and the Air Force, yet the traditional mode failed to produce a common radar program. When I came into this office, Congress had just terminated a program called SOTAS and we were looking at ways to replace SOTAS and, while we were at it, to reduce the proliferation of radar developments in both the Army and the Air Force aimed at doing essentially similar jobs. The Joint Surveillance and Target Attack Radar System (JSTARS) was the result of this effort - a joint program, but one directed by, in this case OSD -- not evolved by the traditional method of voluntary harmonization of military requirements. Congress has directed a number of other joint programs. My point is this - the traditional methods of satisfying a military need by looking at a single-Service solution have been transcended by system capabilities made possible through current technology.

The conventional interdiction initiative, started by the Department during the past year, is an example of this phenomenon. Under this umbrella term we have grouped several joint major acquisition programs advancing modern technology and designed to develop a coherent system to detect, track, target and interdict (using conventional ammunition) the enemy's "second echelon" forces deep behind the front lines. By interdicting the follow-on forces of the enemy, we hope to attrite them and to disrupt and delay their arrival at the scene of the Central Battle so as to maintain the in-contact force ratio to a manageable level.

The Conventional Interdiction Program contains (1) the Joint Surveillance and Target Attack Radar System (JSTARS) program which will round out our theater surveillance and targeting assets by providing a target surveillance/tracking/targeting capability; (2) the Joint Tactical Missile System (JTACMS) which, together with its precision guided submunitions, will give our air and ground forces a lethal standoff capability along with the flexibility of using either air-launched or ground-launched mode to attack targets deep into the enemy's rear, (3) the Air Defense Suppression program which will enhance the ability of our tactical aircraft to penetrate the formidable air defenses of the enemy with less risk, and (4) the Joint Tactical Fusion Program (JTFP) which will tie together the various theater surveillance and targeting assets, such as JSTARS, the Advanced Synthetic Aperture Radar (ASARS) used to detect stationary targets, and the Precision Location Strike System (PLSS) used to locate emitting targets such as radars and jammers.

All of the programs that make up the conventional interdiction initiative have been made possible by recent technological advances in areas such as micro-electronics, data handling and signal processing. To achieve their full potential, these systems must be deployed in a joint, mutually supportive fashion. The Conventional Interdiction Program pools these Army and Air Force assets to build such a coherent capability. When deployed, these systems will keep the enemy under constant surveillance, provide the earliest warning of impending attack, and target and attack his key assets and battlefield nerve centers (the command posts). While engaging his forward deployed forces, this capability will allow us to simultaneously attack his follow-on forces as they are being moved to join the battle at the front.

The concepts embodied in initiatives such as the Conventional Interdiction Program, transcends the notion of traditional single-Service roles and missions. In fact, advanced technologies have made the traditional demarkation of Service lines of responsibilities on the battlefield rather arbitrary and at times counter-productive. We must look to new, joint concepts for the joint use of our modern weapons on the integrated battlefield. We must seek inputs from the Joint Chiefs of Staff and the joint operational commanders to supplement the single-Service solutions to today's problems.

An often beneficial fallout of joint programs is the cost savings that accrue through a cooperative hardware development and procurement which eliminates two or more separate single-Service programs and reduces procurement costs through economy of scale. The savings that are realized in procurement are most significant and typically result from the augmented production base. Once the production base is broadened, attainment of more economic production rates and second sourcing alternatives are clearly evident. Equally appealing is the prospect of the even greater savings reaped in the years to come while the products of these joint programs remain in the active inventory and the Operational and Support costs are reduced commensurately. There, any simplification of the support and logistics structure produces considerable saving over many, many years.

It is not the goal of joint programs to produce either a single solution to a threat or to clone a single system for all the Services to do a given job. Rather, our goal is to use as many common components as is efficient and prudent under the circumstances. In fact, it is often to our advantage to have a variety of weapons to do a given job, since that provides flexibility, multiplies the enemy's uncertainty and complicates his response. The aim of joint programs is not to eliminate versatility, but rather to ensure that versatality is controlled and focused.

Although the notion of joint programs frequently appears attractive in theory, its implementation often presents problems. Perhaps the biggest hurdle to a joint program is the achievement of interservice agreement on joint requirements in the detail necessary to implement a single hardware development program. Differences in individual Service doctrines, tactics, training and logistics procedures tend to diversify system design.

Once the Services establish the fundamental requirements, the OSD role is to provide the leadership which facilitates the execution of the program and to monitor the performance of the program against the mutually agreed upon requirement. Our leadership role is often demanding in that it must be exercised with the utmost finesse. A brute force, approach has never succeeded. A spirit of cooperation must be in evidence on the part of all participants in the joint Service program.

I have found that an interservice oversight group, composed of senior Service and OSD executives, can be of great value in keeping a joint program intact, on schedule and ensuring that the essential requirements of all the participants are met. Joint programs can be successful and can accelerate the introduction of new technology, harmonization of hardware and savings of cost if essential Service doctrines are not ignored, the military effectiveness of the systems not unduly lessened by compromises in design and there is a constant and conspicuous high-level support for the joint effort.

Recognizing the need for joint programs and the difficulties in their execution, I have requested that the Defense Science Board study group be convened this summer to investigate the procedures and practices to increase the success rate of joint Service programs. I am looking forward to reporting next year on the results of their deliberations.

I ask your support for the joint programs in our FY 84 budget request.

JVX PROGRAM

Senator STEVENS. We would be happy to settle for what we have got right now.

Let me remind you of your testimony when you were here in March about the JVX program. You indicated it was in terrible shape and that we had some real problems with it. The Army has withdrawn now.

Have you instituted that risk reduction program you talked about then?

Dr. DELAUER. Yes, sir.

Senator STEVENS. What are you doing to reduce the risks?

Dr. DELAUER. We have funded the contractor with a contract that will run for about 23 months. It was a series of milestones that they have to meet to give us the answers on the configuration and whether or not the design can be implemented in the way we hope.

Let me add, Mr. Chairman, at the time I was over here and Senator Rudman asked me about that program, it happened to be the low point of that particular set of discussions.

Subsequent to that time, we have done a lot of review of requirements. Conversations are still being carried on with the Army with regard to what their future plans are in the helicopter business in general.

SEMA MISSION

As you might remember, one of the requirements the Army had for the JVX was what they called the special electronic mission aircraft, SEMA mission. It was at that time the Army, in reviewing that mission both as to inventory objectives, and the character of the configuration, came to the conclusion that there were other ways to solve that problem than with the JVX, as then envisioned.

Subsequent to that decision by the Army, they had been looking at their long-range plan for modernization of their helicopter force. I have just received that, and it raises enough questions in my mind for the years of the 1990's, where the Army's use of the JVX was originally contemplated, that there may indeed be sufficient requirements in the utility area that a configuration such as the JVX could be utilized. We will take a look at that right now.

I am in the process of requesting the Army to take a look at that requirement and not limit the JVX application only to the SEMA requirement. Looking at their long-range plans, they intend to buy over 3,000 what they call LHX's, which is essentially their light helicopter development program. Over 1,000 of these LHX's will have a utility configuration.

If, out of that several thousand vehicles, a JVX-like configuration for utility missions is not applicable, I would be surprised. We are working on that problem right now.

COST ESTIMATES OF JVX PROGRAM

Senator **Stevens**. The staff tells me we are talking about a cost of $45 billion in excess of the JVX

Dr. **DeLauer**. On the JVX program?

Senator **Stevens**. Yes. Is that right?

Dr. **DeLauer**. There have been some estimates made. It is something like $19 billion in fiscal year 1983 dollars if you believe all of the numbers. I am not smart enough in 1984 to tell you that we are going to buy 58 of these rascals in 1998 at a cost of $843 million.

These typical planning estimates are put down and all of a sudden they are cut to four significant figures and people believe them. I just do not believe these figures.

What I am trying to do is look at the next 5-year plan, its development and application. Studies that OSD has presented on the use by the Marine Corps show that the Marine Corps requirement for developing the JVX at present level costs, plus buying enough for their use, the efficiency that that provides to the Marine Corps on moving troops and the fact they will not have to buy extra ships because of deck space for the helicopters, all combine to provide a net savings over $2 billion in the favor of the Marine Corps to buy JVX.

That is even if none of the other services use the aircraft at all. That to me was sufficient to proceed with the JVX risk reduction program and pin down more of these numbers.

COMPETITION IN JVX PROGRAM

Senator **Stevens**. What has been done in JVX to put the element of competition back into it?

Dr. **DeLauer**. Right now, not an awful lot. Right now we have just got the one program for the purpose of settling on a configuration, finding out its characteristics and seeing if we can build a tilt-rotor aircraft with that kind of a performance. The decision for full-scale development of a production article will not be made until after the 23 months.

Senator **Stevens**. You are disarmingly frank, doctor. I cannot argue with that.

When do you think you can put it in? When can we expect the competitive concepts?

Dr. **DeLauer**. The requirement by the Marine Corps to meet their planning is somewhere around 1989 or 1990. Now, we are also looking at whether the program will come to an end in 1991. I doubt it. I think there will be a Marine Corps with a JVX in 1990 or 1991. But how they will handle their requirement at that particular time, and whether they have to extend the life of some of their existing equipment, are what we are looking at now.

Senator **Stevens**. If you stay sole source during this period we are in now, how can you ever put any competition in it, if you are dealing only with the Marine requirements?

Dr. **DeLauer**. We could have a reasonable amount of competition at the vendor level, and you can have competition at the main airframe level. You know, in this particular program we have two contractors, we have Bell and Vertol as a team. They teamed up thinking there would be an opposing team spearheaded by Sikorsky, and Sikorsky chose not to bid the first part of this program.

Senator **Stevens**. You are not really postulating the Army will come back into this now, are you?

Dr. **DeLauer**. All I can relate to you is, when I discussed this with the Secretary he said this program was Marine Corps and for certain applications for the Army. The decision to proceed with this program and whether or not the Army would participate will be made at the Office of the Secretary of Defense level. So it will be reviewed, I guarantee you that.

Senator **Stevens**. What is really driving the whole schedule now? Is it the 1991 requirement for the Marine Corps?

Dr. **DeLauer**. At the present time, that is the constraint on the program; yes.

SOLE SOURCE ON CONTRACT

Senator **Stevens**. Has that led us to the point we are going sole source in order to drive to achieve 1991 for the Marines?

Dr. **DeLauer**. No. The reason we went sole source with this was that there was only one bid. That does not mean they are the only ones who might be in the tilt-rotor business.

Senator **Stevens**. We had some indication from Sikorsky that they were not given the time to be involved.

Dr. **DeLauer**. Well, you have them drop in and see me and I will discuss with them whether they had time. They dropped out because they did not get a teammate. They talked to a series of other airframe people. I know they talked to Rockwell, McDonnell, and Grumman. And at that particular time none of those outfits had done enough homework. So they opted to pass on this first goround.

You know my view with regard to sole source main platforms. I am not for them. I cannot give you anything that would be a different point of view from my standpoint, that we would go sole source.

SIKORSKY INVOLVEMENT IN JVX PROGRAM

Senator **Stevens**. We had a letter in February that indicated—it was written to the Navy by Sikorsky—in which they point out, because of inherent technical risks, the JVX program requires approximately 33 months to complete the designated task, which includes a comprehensive test program, and the RFP required a firm deliver it on a firm requirement of 24 months, and that they could not respond to the proposal because of the restriction in the program.

In view of the fact that we are dealing with a 1991 to 1993 timeframe, why was not consideration given to broadening that RFP delievery time out? Nine months would seem to work well, particularly in view of the status of the program at the time, with the Army not knowing whether it would be in or out.

It just seems we've limited this from the very beginning.

Dr. **DeLauer**. Let me answer your question from the back to the front at the time we released the RFP the Army was the executive service. At that time there was indications, up until you got that letter, that there possibly would be another team bidding. Sikorsky was very active in going out trying to get a partner. They were unsuccessful and responded to the RFP with a letter stating why they had not bid, and about the same time they had that particular point of view, the fact that they would drop out of the competition, was the time. We made the decision to not to pull the RFP back but to leave it out, see what the responses were, and reexamine the program for the 23-month period with the risk reduction. In my view, we will get just as much were the 23 months out of the contractor team as we would if we had had four or five. As a matter of fact, we will get more from it. The idea is to have an identification of what the development risks are before we take the next step.

TWO ENGINES IN TILT-ROTOR SYSTEM

Senator **Stevens**. Why did you put in two engines, then? Why did you not just go with one engine? You are really saying you are going for prototype development, right?

Dr. **DeLauer**. Yes—well, no. We are going to a risk assessment of a particular program configuration, yes.

Senator **Stevens**. Why two engines, then?

Dr. **DeLauer**. I think on a tilt-rotor system that is probably the best configuration at the present time.

Senator **Stevens**. Two different engines?

Dr. **DeLauer**. There are not two different development engines.

Senator **Stevens**. I am advised there are two different engines in this program right now.

Dr. **DeLauer**. The original program had the provision that if the Army's SEMA requirement was necessary, that the airframe configuration would be such that we could put the modern technology engine which is in the plan into the Army's requirements, because of some of their performance requirements.

The Marine requirements could possibly be met with the existing T-64.

Senator **Stevens**. I understood that we have an interim engine, which is a GE T-64.

Dr. **DeLauer**. That is right.

MODERN TECHNOLOGY ENGINE (MTE)

Senator **Stevens**. The program, however, is based upon the modern technology engine, the MTE. That is not available yet.

Dr. **DeLauer**. That is right.

Senator **Stevens**. That is two engines, is it not?

Dr. **DeLauer**. No, not if, at the time we were to put the Army configuration in, it could handle the configuration of the MTE. The MTE was a parallel development program the Army was carrying on.

Senator **Stevens**. We show a multiservice MTE R&D funding profile starting in 1986.

Dr. **DeLauer**. That is right.

Senator **Stevens**. And it phases into this program, does it not?

Dr. **DeLauer**. That is right. That was the original procurement objective from the Army. They wanted the extra performance the MTE would provide them.

Senator **Stevens**. Was not the Air Force relying on the same engine, the new MTE?

Dr. **DeLauer**. I am not sure if the Air Force could do their mission with the T–64.

Senator **Stevens**. So only the Army may be using the MTE in this JVX program?

Dr. **DeLauer**. If the requirement the Army has is for SEMA only. As I pointed out, there may be a utility requirement that does not need that higher performance engine.

Senator **Stevens**. Are we funding two engines now?

Dr. **DeLauer**. No. The T64 is in production. The MTE engine is a development program, as you pointed out. It is in the 5-year program, but we have not done much with it. All we have said is if you are going to build a helicopter or a rotary wing capability for the 1990's, for goodness sakes do not preclude the fact that you might have an engine available with higher performance in that period of time and take it into account in the design. And that is what we are trying to do. Let me clarify all of this for the record.

[The information follows:]

Engine Options

There are two different engine options being preserved. The JVX is being designed around the Modern Technology Engine, and the MTE is the best In-Service engine solution for JVX. The Army SEMA Mission and the Air Force Special Operations mission require the MTE. At the present time we are funding the demonstrator for the MTE and the MTE full scale development would begin in fiscal year 1986. The T64 engine is needed to conduct the early flight test demonstrations since MTE will not have completed the preliminary flight rating test. All we are saying is if you are going to build a helicopter or rotary wing capability for the 1990's, it should be the most capable vehicle in terms of engine and airframe. JVX is being designed for the MTE, if we had to go to an alternate engine for some reason, it would be the T64. The final engine decision must be made in fiscal year 1985.

MTE PROGRAM DEVELOPMENT

Senator **Stevens**. It looks like there is added cost in this program now to keep open the option that the Army may come back in. If it is just strictly a Marine program, why do you not give it back to the Marines and get out of this idea we will develop the MTE just for this program?

Dr. **DeLauer**. I do not believe, Senator, that the MTE is under development just for this particular program. I will ask Jay.

Mr. **Sculley**. That is correct. It is only prudent that we do develop a modern technology engine. The T64 is a technology from the 1960's. The MTE is anticipated to have much broader use.

Senator **Stevens**. Pull that mike back. There is so much noise we cannot hear up here.

Mr. **Sculley**. Excuse me, Mr. Chairman. We anticipate a much broader use for the MTE engine. The CH47, the Navy's P3 and the Air Force's C130 are possible applications. But again, from a research and development point of view it is only prudent that we press ahead with an engine of this technology.

Senator **Stevens**. Dr. DeLauer, why should we not defer entry into full-scale development until you can present Congress firm aircraft design characteristics and we have the MTE?

Dr. **DeLauer**. Well, the first part of your request I think we can very well do, Mr. Chairman. We will present to Congress what we consider a full-scale development program on what JVX will entail as soon as we are through this risk reduction program or far enough along to have some of the answers. At that time we will see what the engine requirements are and what the cost will be to provide the capability to be able to put an advanced engine in.

DEVELOPMENT FUNDING FOR ALL LINES OF JVX

Senator **Stevens**. You have got $36.4 million for the Army, $14 million for the Air Force, $53 million for the Navy for advanced development for three lines of JVX. That is in the budget now.

Dr. **DeLauer**. That is right.

Senator **Stevens**. Do you need all three in view of what has happened since March?

Dr. **DeLauer**. All three? Those are three traditional line items of budgeting, but that does not mean there are three different air frames.

Senator **Stevens**. I know. I understand that. It is three different line items going into the same program.

Dr. **DeLauer**. That is right.

Senator **Stevens**. But do you need all three for this program in view of the fact the Army is not in it now?

Dr. **DeLauer**. I would like to keep them in it. The President's budget had them in it.

Senator **Stevens**. But they are not in it any more.

Dr. **DeLauer**. They say they are not in it, Mr. Chairman. I keep saying to you the Secretary of Defense has not told them that they are out. The only facts are, first, the Army has provided the Navy, who runs the project office, with the money they have to do this risk reduction. The rest is all planning numbers.

Second, the Army said they will not be managing the program from St. Louis. On the other hand, I have told the Army they will provide their technical support to the Navy Program Office. A Marine Corps colonel has been the program manager from day one. He just moved into a different office. He will do the job.

During the next 3 months when we review the 1985 budget, we will have some discussions with the Army on why they are not supporting a tilt rotor concept for their advanced helicopter program.

Senator STEVENS. Mr. Secretary, I have a letter—it is funny how we file these things—but it says: "This correspondence constitutes formal notification that the Army has withdrawn from the program." And yet, we still have a request for $36.4 million for the Army for this program.

Dr. DELAUER. Keep it in there. [Laughter.]

Senator STEVENS. You do not mind if we put a little fence around it that says you can spend it only if they get back in the program?

Dr. DELAUER. You and I could make program managers, could we not?

HIGH-SPEED ANTIRADIATION MISSILE (HARM)

Senator STEVENS. Let us go on to HARM.

Dr. DELAUER. Oh, that is a good one.

Senator STEVENS. High-speed antiradiation missile.

Dr. DELAUER. Right.

Senator STEVENS. You were going to tell us what you were going to do to resolve the impasse in establishing on this one to a competitive second source for production of HARM. Has anything been done on that?

Dr. DELAUER. Yes; there have been some things done on it. Let me give you the status on that.

When we reviewed the HARM last fall, the Navy came to a conclusion that the present HARM configuration and the present program being carried out by Texas Instruments was a nonaffordable program for them and that something had to be done.

During the same period of time there was an interest in Congress that perhaps one of the ways to make it more affordable was to have greater competition and establish a second source. Last year, Congress appropriated $80 million for the purpose of instituting a second source on HARM.

In reviewing the Navy's concern, at the same time recognizing that the Air Force had an immediate need for the HARM system, we had to look at a different way in which we could establish this competition. It was establishing a second source and splitting procurement between the two of them in about 3½ or 4 years when the second source would be up to a greater production level and you could make that kind of a decision. The question was how much would it cost to put them in the business.

The $80 million was really a downpayment on what it was going to test when we were all finished. Indeed, could the Defense Department afford a second source when the presently projected inventory objective was only 17,000 articles.

In reviewing the HARM program for DSARC, which is my job, I had an independent cost examination of the program made by the OSD independent cost organization or CAIG; and we came to a slightly different result than the Navy did with regard to potential cost savings on that program.

The differences were in two places: One, the estimates of what it would cost to put the second source into production; the other concerned what would be the inventory objectives and what the unit costs would be as a consequence of competition. There was a difference of opinion.

I looked at the program in detail. I also had Sol Love, who provides a special service to us in this area because of his background in production take a look at it as well. And at that time we, the OSD, came to the conclusion that it was not prudent to put a second source in for HARM production. It was just too expensive a system.

Now, we have underway at China Lake an experimental development version, a lower cost one. The lower cost is not one just because you via a modern approach to manufacture the microelectronics. The seeker itself does not have the same performance as a HARM. HARM covers a broad frequency spectrum that essentially matches what the Air Force would like and what the Navy wants.

In our examination the Navy looked at their requirements, and during the early examination they felt they could come up with a seeker that did not cover the full spectrum and would be applicable on most of their targets. As a consequence, we could build a cheaper seeker.

So, one option available to us was to go second source, put them into production for the purpose of competition and then essentially be stuck with that configuration for the next 8 years or so, and at the same time go into a further development for a lower cost seeker and then phase that in.

Our view, the one I recommended to the Secretary was take the $80 million, enter into a competitive approach for the seeker itself to reduce the total cost of the program. The total costs come down just by having two people do it. The Navy concurs. And that is what the Secretary's job is. And I have on his desk——

DUAL SOURCE FOR HARM

Senator **Stevens**. Both Houses last year took the position there should be a dual source, at least for HARM.

Dr. **DeLauer**. That is right.

Senator **Stevens**. The Navy has, as I understand it, been in contact with our staff and indicated that they would like to proceed on a competitive second source concept because they believe it would lower costs and improve reliability.

The Navy request before us is for $192.9 million; the Air Force request is $178 million, a total of $370.9 million in this program at this time.

Now, we understood there were some technical and reliability problems that were prime considerations in the decision not to go ahead with a competitive second source. But at the same time the Department has now decided to double the production rate. When you are doubling the production rate is it not time to think about a competitive second source, as both Houses have indicated they would like to see you do?

Dr. **DeLauer**. We are doubling the production rate but from a very low initial rate. It is not anywhere near where you would have the most economical rate.

Senator **Stevens**. When do you think you will get an economical buy?

Dr. **DeLauer**. In my view you will never get an economical buy of HARM. It is too expensive a system.

Senator **Stevens**. Are you telling me we will not get to second source?

Dr. **DeLauer**. I have tried to explain to you my recommendation, Mr. Chairman. My recommendation is to proceed on advanced development of a new seeker so as to reduce the overall cost of the program, the HARM missile, for an inventory objective of 17,000 missiles.

In the present configuration I do not care what you say, or whether they have second source or not. You can take all of the savings you want to have second source or first source, because the total program cost is too expensive for that particular configuration. And we have to reduce the total cost of the antiradiation missile inventory from what the present HARM program is in the long run.

Now, the present budget requests are for existing HARM configurations of which, in my own view, we will find that the inventory objectives are going to be much, much lower than the 17,000 that is now projected. The Air Force has a need for an antiradiation missile of the HARM configuration to the tune of about 9,000.

Senator **Stevens**. Let me put this aside for a few moments. I believe Senator Rudman is on the way. He may want to ask some questions about HARM.

Senator D'Amato, I did tell Dr. DeLauer we would finish with him by noon. He has another appointment. Do you have any questions of Dr. DeLauer?

Senator **D'Amato**. Yes; I do, Mr. Chairman.

Senator **Stevens**. Why do you not proceed?

AIR FORCE/NAVY CONFLICTS OVER JTID SYSTEMS

Senator **D'Amato**. I want to ask him how we will resolve what seems to be a recurring conflict between the Navy and the Air Force over the various JTID systems?

By the way, Mr. Chairman, I have a statement for the record I would like to submit along with some questions which may obviate the necessity of my going through the whole background of this program.

But we finally come down to the point where Secretary Weinberger, in a May 19, 1983, memorandum that establishes the enhanced JTIDS program, clearly states this was formerly the HAVE CLEAR program. He further states that enhanced JTIDS "will now operate in an alternate frequency band." And it is designed to incorporate a wave form that is compatible with the JTIDS distributed time division multiple access waveform used by the Navy.

He is really calling for us to get together on this, and yet there is a clear and persistent course of conduct which would lead one to believe that what is taking place here is that some people are out to knock out the Air Force voice communications system.

I see Mr. Latham back there shaking his head. You have been at the forefront of this, Mr. Latham, and the Air Force really feels that you have a, shall we say, "bug" motivating you in this direction. I do not think we can afford to have this kind of situation take place in light of the Secretary's last memorandum on this.

Are we resolving this? I have some real questions.

Dr. DeLauer. It is resolved.

RESTRUCTURING OF HAVE CLEAR SYSTEM

Senator D'Amato. It is resolved. But if you read the House language, they have come out differently here—the House Armed Services Committee includes the following language in their report:

> The committee is concerned over the lack of interoperability between Air Force and Navy aircraft communications systems. The committee is advised that the systems originally proposed by the Air Force will not be interoperable with Navy aircraft. In recognition of this problem the Under Secretary of Defense for Research and Engineering has advised the committee of his intention to terminate the HAVE CLEAR system in favor of the advanced joint tactical information distribution system. The committee has been assured this advance system would be a remnant of the existing joint tactical information distribution system, JTIDS, but include an alternate frequency band designed to meet Air Force requirements and would provide interoperability with Navy Tactical Air Command."

I have a serious problem with the $20 million funding level in their bill and with several aspects of the language I have just quoted. I want to express these concerns to you.

Are you saying that $20 million level is sufficient, or are we going to put a crimp in that Air Force program and kill it?

Dr. DeLauer. Let me answer your inquiry in a reasonably chronological order. We have—I know the language from the House subsequent to that being inserted. We have reviewed the two programs. They are both antijam communications systems. The HAVE CLEAR system that the Air Force needed was a voice system. The JTIDS was voice and data. In the Air Force's view they had to have a gain margin, and antijamming characteristic beyond that provided in the JTIDSs, and it was a requirement they had particularly for Western Europe. That led to this question of whether or not we could accommodate both systems and still have interoperability between the two, and that was the concern of the House Armed Services Committee. I assured them we would have it interoperable.

The consequence of this review has been to take the HAVE CLEAR system, the requirements for gain margin, and the nature of the program and to provide that for the Air Force. At the same time the Air Force and the Navy have agreed that this system in Air Force aircraft will indeed be compatible with the necessary communications the Navy has to have in that particular theater.

Now, the reason for the $20 million, to answer your question explicitly, the $20 million was for the purpose of restructuring the HAVE CLEAR program which we had called the enhanced JTIDS.

Senator D'Amato. It is not clear in this committee language that you recognize that.

Dr. DeLauer. That is why I am here. That is why you get me here, to answer these questions. I am telling you that the enhanced JTIDS from the Air Force's side is based upon HAVE CLEAR, and that both the services are budgeting their resources to be able to make it interoperable where it has to be interoperable; that is, from certain aircraft to the AWACS and AWACS to the Navy. And we are doing that. In no way have we eliminated the HAVE CLEAR system for the Air Force.

And since this is a hearing on joint programs, that has got to be the toughest one I have had to handle in the last year and a half.

EVOLVING CONCEPT OF SERVICES

Senator **Stevens**. In 1981 this was SEEK TALK.

Dr. **DeLauer**. That is right.

Senator **Stevens**. In 1982 it was HAVE CLEAR, and in 1983 it is enhanced JTIDS.

Dr. **DeLauer**. That is the son of SOTAS. It is the same thing.

Senator **Stevens**. How are we supposed to keep track of these changes and how they fit into it when there is an evolving concept? I understand you did write and say you wanted to keep $20 million in the program.

Dr. **DeLauer**. That is right. We had to restructure the HAVE CLEAR program.

SEEK TALK SYSTEM

Senator **Stevens**. What happened to SEEK TALK?

Dr. **DeLauer**. SEEK TALK grew older and became HAVE CLEAR, which is now enhanced JTIDS.

I will let Tom speak to this. He has been on both sides of this. In this one, Senator, I expect you to pat me on the back. This was above and beyond the call of duty to throw this joint program together. I had to spend 3 days on the memorandum of understanding and wordsmith every single paragraph between the Navy and the Air Force. Your staff must have fun understanding it. I am telling you that it is a masterpiece of being sure everyone was taken care of.

Senator **D'Amato**. Mr. Chairman, if I might, I think one of the things you are talking about is the $20 million, and you are saying everyone is being taken care of.

Keep your microphone. I have trouble hearing you.

Dr. **DeLauer**. I want him to talk.

Senator **D'Amato**. No. I want you to talk. You went from a $57.9 million spending level down to $20 million.

Dr. **DeLauer**. That is for 1983–84.

Senator **D'Amato**. What is that going to do in terms of an IOC? Are we going to get five more changes in name and program direction? I mean that is a pretty effective way to kill the program.

Dr. **DeLauer**. We are not going to kill it.

Senator **D'Amato**. From $57.9 million down to $20 million, what effect will that have, that level of funding, on the system's IOC date?

Dr. **DeLauer**. Look, Senator, there is no question that the Air Force with their SEEK TALK, HAVE QUICK, and HAVE CLEAR were proceeding on——

Senator **D'Amato**. And enhanced——

Dr. **DeLauer**. No. I am saying it correctly. They were proceeding on an acquisition path, had a spending rate higher than will now be spent in the next year in order to configure the program to make them interoperable.

I will let Tom Cooper, who has been in on this, give you some detail.

CURRENT FUNDING FOR PROGRAM

Senator STEVENS. How much are you spending this year?

Dr. COOPER. The money has been on hold, Senator, until this issue has been resolved.

Senator STEVENS. How much money do you have available today that has not been spent?

Dr. COOPER. I believe $10 million was authorized and appropriated last year with authority to reprogram or permission to reprogram if we needed more.

Senator STEVENS. And you are saying you want $20 million on top of that.

Dr. COOPER. The request, Senator, was for, I believe, $57 million.

Senator STEVENS. Dr. DeLauer's letter says hold at least $20 million for each program.

Dr. COOPER. That is right. That was in response to the House action, and that was actually somewhat pending resolution of the issue.

Senator STEVENS. I want to make sure Senator D'Amato and I agree about this now. When would you anticipate releasing the $10 million if $20 million is added to it? That will make it a $30 million level for 1984; is that correct?

Dr. COOPER. No, sir. The $10 million is 1983 money. Approximately $6.5 million was released earlier in fiscal year 1983, and the balance of the $10 million was released to our field units earlier this month—June 1983.

Senator STEVENS. It is 2-year money. You still have it available for 1984.

Dr. COOPER. We could use it for 1984, but our intent is to put it on contract in 1983. If I could, I would like to address Senator D'Amato's question on behalf of the Air Force.

Senator, had you asked that question about whether or not we had our act together 2 months ago, I would have had to have told you no. As you point out, there was an issue in the building, and it has been raging for a number of months. But I think I can honestly say right now the Air Force is pleased with the outcome of the deliberations we have had; and I was somewhat on the other side of the issue at one point.

We have been able to convince Mr. Latham and OSD that we do indeed have a requirement for a robust antijam secure voice capability. And the issue that remains—I think Mr. Latham can speak for himself on that—but the issue that remained is how will this interoperable with the digital system.

As you pointed out, what we are going to do in the enhanced JTIDS system is to add an alternate frequency band that will be interoperable with the Navy JTIDS system, the distributed time division multiple access. So I think I can honestly say on behalf of the Air Force we are satisfied the JTIDS system is HAVE CLEAR with this interoperability mode that will hopefully be added.

Senator D'AMATO. Do you intend to do that under the existing contract?

Dr. **Cooper**. We had not released the contract pending resolution, so when you put the $10 million on contract, that will be a part of it.

Dr. **DeLauer**. And we have to restructure to do these additional things.

Dr. **Cooper**. But to answer your question on $20 million versus $57 million, I think the honest answer to that is if we had $57 million, we could move faster, and that is our request. And what we are responding to is the action the House took for $20 million.

Dr. **DeLauer**. They were going to cut it all out.

Dr. **Cooper**. They were going to zero it, so there was some negotiation going on.

Senator **Stevens**. That is what I am trying to make clear. Your letter says at least $20 million. You got $10; you asked for $65. What does "at least" really mean?

Dr. **DeLauer**. Well, as I remember——

Dr. **Cooper**. The $65 million, Senator, only a portion of that was for HAVE CLEAR which is now enhanced JTIDS. That was $57 million. That is the optimal program we see right now to move at the most prudent pace, $57 million.

Senator **D'Amato**. That is what you should indicate. The Air Force is saying to move at a prudent pace you need $57 million, and my question is if you are going to get $20 million, what will that do to the program? How important is this program?

Dr. **Cooper**. It is very important to us. If we get less money, we will move at a slightly slower pace in fiscal year 1984.

Dr. **DeLauer**. That is right.

REQUIREMENTS UNDER CONTRACT

Senator **Stevens**. With the $10 million what are your needs under the contract you are contemplating?

Dr. **Cooper**. We have not definitized the contract at this point, but if we get $57 million, that is what we will put in our contract in 1984.

Dr. **DeLauer**. The pace of the program depends upon the 1984 funding. In the case of the House, they did not think we had our act together. One way to keep the program going was when we requested at the $20 million. That was sufficient to help the program so it would not be killed.

Senator **D'Amato**. Now you have got your act together, do you need more money?

Dr. **DeLauer**. Sure. We will take $57 million.

Senator **D'Amato**. Oh, so you need the $57 million for the prudent development of this program, is that not correct?

Dr. **DeLauer**. That is right.

Senator **D'Amato**. OK. I just wanted to get that in.

Dr. **DeLauer**. I kept trying to tell you that in the letters we wrote you.

Senator **D'Amato**. Thank you, Mr. Chairman.

Senator **Stevens**. Yes. You had better quit while you are ahead. [Laughter.]

TOMAHAWK MISSILE SYSTEM

You have a second source for Tomahawk now, a technology transfer program requiring 10 missiles in 1982, 52 missiles in 1983, and to enter a competitive phase in 1984. Is that on schedule?

Dr. **DeLauer**. That is on schedule, Senator. The RFP's are out, and they are responding to those. You know what that second source is for the record.

Senator **Stevens**. You are on schedule now with 32 missiles rather than 62 missiles. How did you do that?

Dr. **DeLauer**. As you know, the whole Tomahawk program had to be restructured as a consequence of the review of the second list the Chief of Naval Operations made last year and the Secretary reviewed. As a consequence, the production rate of Tomahawks were curtailed and truncated until we got some of those problems fixed up.

TECHNOLOGY TRANSFER MISSILE PROGRAM

Senator **Stevens**. What about this technology transfer missile problem? Have both contractors agreed to the lower number of technology transfer missiles and to fixed price competition for 1984?

Dr. **DeLauer**. That is what we will see when we get the RFP's.

Mr. **Paisley**. That is correct. They have agreed to the 22. That was a long negotiation going down from I think 52 missiles down to 22, and both contractors have agreed they can make the technology tranfer within that allotment.

Senator **Stevens**. We were told the antiship version of the Tomahawk was decertified because of end-gain anomalies associated with final terminal maneuvers. Now, that is sort of hard for me to understand what that means.

What really was the problem, and do you intend to try to recertify the antiship version of the Tomahawk?

Mr. **Paisley**. Help me a little bit. Did we not just do that?

Dr. **DeLauer**. Yes. We just recertified it.

Mr. **Paisley**. In fact, I think it was last week. We have had, I am glad to say, a very successful test program over the last 1½ months. The last five test shots were all successful. The program is turning in a very positive fashion in terms of test results, and we have recertified it.

Senator **Stevens**. Does the recertification change the program requirements at all for 1984?

Mr. **Paisley**. No. What we will do is the program manager will come to the Secretary of Navy and ask him for an increase in the allowed production rate. We set them back until we could get this problem resolved. It will not change the requirement. It will just allow us to proceed in the fashion we said we were going to.

MEDIUM RANGE AIR-TO-SURFACE MISSILE PROGRAM

Senator **Stevens**. All right.

Doctor, last year the Navy supported congressional efforts to have it withdrawn from the medium range air-to-surface missile program. What will the Department do about that now? Does the

Department think the Navy has a requirement for the medium range air-to-surface missile program?

Dr. DeLauer. We think they do now.

Senator Stevens. They told us it was redundant and they had higher priorities.

Dr. DeLauer. That is right.

Senator Stevens. The Navy preferred alternatives, including Harpoon, the 12R Maverick, and Tomahawk.

And another classified program. What is your request to the Senate this year on the Navy's inclusion on this medium-range air-to-surface missile program?

Dr. DeLauer. The whole question of standoff capability for both the Air Force and the Navy is a common requirement. The differences between the two of them is that the guidance systems are slightly different, although they can be interchanged in the same platform. The standoff range is another point of discussion. The Air Force version has a higher standoff range, something in the 200-plus nautical miles. The Navy would like that, but some of their other candidates, as you have mentioned there, have shorter ranges. I cannot talk about them all in an open hearing. The question is, Shall we have more than one standoff air-launched medium-range tactical standoff capability?

Senator Stevens. What I am really getting at is this. If Congress decides to follow the Navy's suggestion and zero the Navy's portion, and direct its termination of the program, is not the full amount of money requested for a medium-range air surface missile program still required to finish the Air Force effort for final development. It would not be cost saving, would it?

Dr. DeLauer. No.

Senator Stevens. I understand there is some sort of a hit list over there, some 19 programs that the Air Force may be considering recommending to terminate. Is this on the Air Force's hit list?

Dr. DeLauer. I don't know. They have not sent me the POM yet. You will have to ask the Air Force. The Air Force is in the process of putting their 1985 requirements together. Of course, it will be based somewhat on what the final answer is for 1984.

Senator Stevens. I suggest you had better share that with us, or someone had better. I would hate to go to battle and save the money for medium-range air-to-surface missile programs on the basis that we think it is a higher priority than you do. If you have a hit list for 1985, we are liable to fund in 1984 things you will hit in 1985, and not fund the things in 1984 you want in 1984.

Dr. DeLauer. I agree with you. Maybe Tom Cooper can answer that for you.

Senator Stevens. Aviation Week lists the hit list. It is interesting how some people seem to see these things long in advance of other people.

Dr. DeLauer. But no one drags Aviation Week in, sits them down and questions them over how accurate they have been over a period of time.

Dr. Cooper. Mr. Chairman, I can answer your question.

Senator Stevens. They have good cartoons.

COMMITMENT TO COMPLETION OF MRASM PROGRAM

Dr. **Cooper.** We are not proposing the MRASM be terminated at this time. We are committed to completing development of MRASM. We are supporting the 1984 budget, which I think is $40 some million that will be money in 1985, I believe, for the development. We have not made a commitment yet to the production of MRASM.

Senator **Stevens.** I do not believe in asking people to go through hit lists, but as far as this thing is concerned, we should disregard the lack of support for the Air Force for 1985 for MRASM.

Dr. **Cooper.** We are supporting MRASM through development, and have not yet made a decision on the production of MRASM.

RELEASE OF RFP

Senator **Stevens.** You have to go. One last question. You stated in March that the joint surveillance and target attack radar system has been somewhat slower than originally anticipated. Do you have a plan now to release the RFP to industry, and has there been any change since you were here last?

Dr. **DeLauer.** It has been released. Jim tells me we have released that RFP.

Senator **Stevens.** It has been released? Well, should we give full-scale funds to the Army and the Air Force?

Dr. **DeLauer.** Let me correct that, Mr. Chairman. The Army says the radar RFP will be released next month.

USE OF C-18 TO TEST J-STARS RADAR

Senator **Stevens.** Have you resolved the disagreement between the Air Force and the OSD over the use of the C-18 aircraft as a test bed for the integration of this J-Stars radar?

Dr. **Cooper.** Mr. Chairman, let me tell you what the Air Force's position is, and then I will turn it back to OSD. Our position is——

Senator **Stevens.** Go ahead and go, Doctor. It is nice to have you here. We appreciate your courtesy.

Dr. **DeLauer.** It is always a pleasure to discuss these things, Mr. Chairman.

CUT IN HOUSE FUNDING OF $69 MILLION

Senator **Stevens.** Do you want to tell me also what you are going to do about the House cut of $69 million? Are you appealing that, Dr. Cooper?

Dr. **Cooper.** Yes, sir, we are. Our position on the J-Stars radar is, we have agreed that radar should be scaled and designed to go on an OV-1 for the Army and a TR-1 for the Air Force. Those should be the constraints, and that should be an identical radar. Those are the constraints we have placed on it, but we have asked to reserve the right to have an option somewhere downstream to integrate that radar to a 707 or, as we call it, a C-18 aircraft.

We would also like to take a version of the PAVE MOVER radar, which is in development, and use it as a test bed on a 707-type aircraft. That has been the Air Force's position on it, and I will turn it over to Dr. Wade to give his comments.

Dr. **Wade**. Thank you, Mr. Chairman.

From the OSD perspective, our priority at this time is to get this joint radar program under way and meet the early IOC, particularly the 1987 need for the Army. The direction now under way is that the common identical, radar which will fit both the OV-1D, and the TR-1. As far as the place and role of the C-18, thereafter, we have that under continuing review. We really want to put the emphasis now on this joint program meeting the 1987 IOC.

TURRET INTEGRATION IN LIGHT ARMORED VEHICLES

Senator **Stevens**. Secretary Weinberger has noted in a letter that none of the light armored vehicles has demonstrated suitable operationally effective turreting. The problem seems to be turret integration. What have you done about that program? Who know about that?

Dr. **Wade**. Let me ask Mr. Sculley to comment, Mr. Chairman.

Mr. **Sculley**. I am not particularly well prepared to answer that question directly, Mr. Chairman.

[The information follows:]

LAV-25

Some deficiencies in turret integration were noted during development and operational testing. The contractor, however, has upgraded the turret and corrected many of the deficiencies. Appropriate action is now under way to verify that the contractor has taken corrective action. A confirmation test period has been arranged at Aberdeen Proving Ground for June–September 1983. Test issues identified by the Army and USMC operational test agencies have been integrated into the basic test design plan. Operational crews as well as technical personnel will operate the LAV-25 to retest the conditions which caused the initial deficiencies. In addition to confirmation testing, initial production tests will be conducted by operational personnel on vehicles delivered in the October/November 1983 time period. An independent evaluator will evaluate both test periods, and the data generated will also be used by both operational test agencies to confirm that deficiencies have been corrected. The contractor is required by the terms of the contract to correct all deficiencies at no cost to the Government.

EFFECT OF DENIAL OF FUNDS

Senator **Stevens**. We would like to know. The House, as I understand it, denied funds in the House Armed Services Committee for that. What will be the effect of that denial as far as that program is concerned?

Mr. **Sculley**. The impact there would, I feel——

Senator **Stevens**. You can just put it in the record if you would like.

Mr. **Sculley**. We would be glad to.

[The information follows:]

LAV-25

The HASC cut defeats a Joint Army-USMC program that is supported by both Service Chiefs. Fiscal year 1984 begins the third year of a five-year multiyear contract. The contract requires that both the Army and USMC quantities of LAV-25 be called up simultaneously for each production year. Should this not occur, as the HASC mark would indicate, the contract would be voided and the Government would be liable for a cancellation charge of $31.4 million. In addition, if the Army is eliminated from the Joint program, the potential for an affordable renegotiated contract based on USMC quantities is unlikely.

STINGER

Senator STEVENS. Who has the Stinger? Is that yours, Dr. Cooper?

Dr. COOPER. No, sir. That is Mr. Sculley.

Senator STEVENS. The postulated threat to the Stinger defense missile has changed, we are told, and adjustments in the program are being proposed. I understand there are some security restraints, but what really has changed? And what we really want to find out is, should full production be started on this, or should we move directly to another version?

Mr. SCULLEY. Yes, sir, you are absolutely correct. I need to be careful what I say in the threat assessment.

Senator STEVENS. You may answer for the record so we do not get into any trouble.

Mr. SCULLEY. I will be glad to.

[The information follows:]

STINGER

Development of Stinger-POST began in 1977 to counter the threat known at that time. This threat assumed target aircraft would [deleted]. In April 1982, the Army's Intelligence and Threat Analysis Center provided an updated threat assessment which identified the need [deleted].

The Army previously identified an unfunded Product Improvement Program to upgrade the Stinger-POST with a reprogramable microprocessor to counter the currently postulated threat while concurrently providing the capability for subsequent changes as the threat evolves. Competing for funds under the Product Improvement Program process would significantly delay completion, resulting in the majority of the fielded weapons being either Basic Stingers or Stinger-POSTs. In order to expedite deliveries of Stinger-POST missiles upgraded with a reprogramable microprocessor (RMP), the Army has approved a program to concurrently develop and produce Stinger-POST (RMP). The program, however, would require transfer of fiscal year 1983 Stinger procurement appropriation funds into Research, Development, Test and Evaluation funds. If problems were encountered during the research and development phase of reprogramable microprocessor, the Army will have provisions in the contract to produce Stinger-POST without the reprogramable microprocessor.

JOINT SERVICE HIGH MOBILITY MULTIPURPOSE WHEELED VEHICLE

Senator STEVENS. It looks to us as if there are some changes there that might have an impact on changing our funding. One last question, gentlemen. I am told that recent operational tests of the joint service high mobility multipurpose wheeled vehicle have brought up some problems, the power train, the light system, structural welds, suspension. Will any of those problems be tested further before this vehicle enters into production?

Mr. SCULLEY. Yes; they will, sir.

Senator STEVENS. When?

Mr. SCULLEY. To my knowledge, that is currently ongoing.

Senator STEVENS. Does it have anything to do with your program requirements? Will it delay the program requirements, those problems?

Mr. SCULLEY. I would say it does not. I do not view any of the difficulties we have experienced as being insurmountable or unusual in development of that program.

SUBMITTED QUESTIONS

Senator **Stevens**. I thank you very much for your patience. We have further questions that have been submitted not only by me but by other members of the committee. As usual, we will tender those to you, and will appreciate your prompt response.

[The following questions were not asked at the hearing, but were submitted to the Department for response subsequent to the hearing:]

ADDITIONAL COMMITTEE QUESTIONS

JOINT SERVICE PROGRAM STUDY

QUESTION: Mr. Secretary, the whole idea of joint Service programs, as we understand it, is to cut costs and duplication whenever there is a common need to develop a military system. That seems simple and straightforward. But the application doesn't seem to be working that way. Why is it that so many of your joint Service programs seem to have so much difficulty?

ANSWER: Our major problems arise with joint programs that call for a joint Service development of a completely new hardware. Here, the biggest hurdle is the achievement of an interservice agreement of a joint requirement in sufficient detail to be able to implement a single hardware development. Each Service has somewhat unique requirements and to make it a joint program, some compromises must, naturally, be made. At times it is difficult to achieve these compromises.

I have tasked the Defense Science Board to review the management of joint Service acquisition programs and make recommendations on how we might formulate and execute them more effectively. They are to examine both past and present joint Service programs for lessons learned and then make recommendations as to changes, if necessary, in our policies and procedures.

JOINT PROGRAM INITIATIVES

QUESTION: What is the Defense Department doing to prod more cooperation out of the Services so that these joint programs can achieve their goals?

ANSWER: For a joint program to succeed, all participants in it must agree to the need and the priority of the program and must support it accordingly through their financial contributions. There must exist a spirit of cooperation among the parties involved.

It has been our experience that such conditions are best achieved by involving senior Service and OSD executives in the process of reaching the fundamental agreements that govern the prosecution of joint programs and in the oversight activities to ensure that all the pariticipants fulfill these agreements. One mechanism which we are using is the formation of an interservice program oversight group, like the Interdiction Executive Board (IEB) which oversees the conventional interdiction initiative that encompasses such joint programs as the Joint Surveillance and Target Attack Radar System (JSTARS), the Joint Tactical Missile System (JTACMS), the Precision Location Strike System (PLSS), the Joint Tactical Fusion Program (JTF), and the Joint Suppression of Enemy Air Defenses (JSEAD) program. Composed of high-level executives from the Services, the Organization of the Joint Chiefs of Staff and OSD, the IEB convenes at the call of its Chairman Dr. Wade to address major issues concerning any of these joint programs.

It is expected that the DSB 1983 Summer Study on Joint Programs will lead to some new policy guidelines to help improve the chances for success.

Another positive step taken to ensure the viability of joint programs is the involvement, early on, of the ultimate users of the products of these programs - the Commanders-in-Chief of the operational forces. Their contributions to the requirements formulation process is absolutely essential.

Finally, to be successful, a joint program must have a continuous and conspicuous high-level support both within the Department and in the Congress.

JOINT SERVICE PROGRAM PROBLEMS

QUESTION: Are there any basic management shortcomings in the ongoing joint Servie programs? Or are we just talking about Service rivalries and competing priorities?

ANSWER: Primarily the latter. Although management of a joint program is made more difficult by the multiple chains of coordination and reporting than management of a single Service program, the basic program management skills are essentially the same.

The GAO is currently completing a report on joint Service programs in which they highlight the various impediments to a successful joint Service acquisition. The GAO includes Service rivalry and competing priorities as well as roles/mission differences, timing of merger, and lack of incentives for jointness as impediments.

JOINT PROGRAM MISSION REQUIREMENTS

QUESTION: From your statement it appears OSD is fitting the mission to the technology in many cases. Why shouldn't the Services jointly work out their mission priorities with OSD as arbitrator?

ANSWER: OSD is not fitting the mission to the technology. Rather, OSD is trying to harmonize single-Service requirements which in many cases, happen to be very much alike in all but a relatively small area. Harmonization of these requirements are necessary because (1) embarking on several similar, but separate developments is too expensive and (2) modern sensor, weapons and data processing/handling technology allow the achievement of a capability from a coordinated system which exceeds the sum of the capabilities of the individual weapons that comprise that system, provided that proper interoperability exists among these constituent weapons.

Systems under development by a single Service seldom achieve the high degree of cross-Service interoperability because to do so costs money and in a single Service program it has a lower priority than some other need. Unfortunately, the adverse effects of lack of system interoperability sometimes only becomes apparent in deployment or joint exercises when, for example, an airborne unit can't talk to a ground-based unit because their equipments are incompatible.

AIR FORCE JVX REQUIREMENTS

QUESTION: We question the immediacy of the Air Force need for JVX. The Air Force plans to modify an Army Black Hawk by 1987 to meet shortfalls in its rescue and special operations fleet. Moreover, it has told the subcommittee in answer to written questions that the HH-60D is a more urgent requirement than JVX, which it won't receive until 1993.

Since the Air Force need for JVX is not urgent, can't Air Force participation in the program be slipped?

ANSWER: Given the facts that the JVX: (a) promises to enhance this nations capability through next generation technology, (b) is not affordable as a single service development program, and (c) fills a validated Air Force requirement; the AF has agreed to participate up-front as part of a tri-service development program.

Even though the AF has a higher priority need in the near term, under the joint development concept, requirements must be designed into the basic aircraft at the onset to avoid extensive modifications later on.

JVX

QUESTION: Why don't we use a gap-filler for the Marines such as a modified H-60 BLACK HAWK -- rather than pursue the current sole-source/two-engine program?

ANSWER: First, it is important that the Congress understand that the current JVX program is neither sole-source nor developing two engines. The Army developed the JVX acquisition strategy to maximize the competitive environment consistent with the need to field aircraft in 1991. The RFP for Preliminary Design, released by the Navy as lead service in January 1983, was basically the same RFP drafted by the Army in 1982. The RFP was fully competitive and open to all proposed technical solutions; it was not a sole-source, directed effort. Only one engine, the Army Modern Technology Engine (MTE), currently under contract as a demonstrator project with General Electric and Pratt and Whitney, is being developed for JVX. It is the baseline design engine for the aircraft. As the MTE will not be available for Developmental Testing, Marine Corps Operational Testing and 1991/92 deliveries, we plan to use the existing T64-General Electric engines in Full Systems Development and early, low rate production aircraft until the MTE is available in 1993. The T64-General Electric engine requires no development; funds will be used only for aircraft integration and testing.

Second, interim aircraft to meet the Marine Corps' urgent 1991 need are not required because the Army's JVX acquisition strategy, approved by the Deputy Secretary of Defense on 8 December 1982, provides for these 1991 deliveries. The JVX program, first conceived by the Under Secretary of Defense (Research and Engineering) in mid-1981, has been formulated to yield cost- and combat-effective answers to all the services' needs in a timely manner. The funding of interim aircraft is neither cost-effective nor required, provided that the current development schedule is maintained. The Department of the Navy has repeatedly analyzed the use of H-60 sized aircraft to meet interim or mid-range assault medium lift transport needs: in 1971 with the Army's UTTAS project, in 1972 with Navy's HXM/HSX project, and in 1974-75 for the Congress. In each of these cases we came to the same conclusions - that an H-60 like aircraft for the Marines had a significant shortfall in cabin sizing for troop and cargo lift and lacked several other critical characteristics which made it an inefficient alternative for accomplishing time-constrained and ship flight deck limited amphibious assault missions. Because JVX is sized to the Navy's existing and planned amphibious ship acquisition program, the JVX program offers substantial cost-avoidance for the Marine assault transport mission: nearly $2 billion in aircraft acquisition costs, six LHD class ships, and over 4,000 fewer Marines for the operation and maintenance of a JVX assault force as compared to an equal lift capability H-60/H-53E force. In addition to the substantial cost-avoidance that JVX holds for the Marines, JVX will provide all services with enhanced strategic mobility for conventional forces with the worldwide self-deployability inherent in the original Marine requirement, will yield increased tactical flexibility due to its speed and high transport productivity, and will provide major savings through joint development and logistics commonality.

QUESTION: The Marine Corps requirement for a 1991 IOC is driving the overall cost, schedule and technical risk of the program. What impact has the Marine IOC on the current sole-source development path?

ANSWER: The current JVX acquisition strategy, formulated by the Army and approved by the Deputy Secretary of Defense on 8 December 1982, is paced by the Marine Corps' urgent need for the 1991 fielding of assault transports with high productivity and self-deployability. This schedule has resulted in the services utilizing several of Mr. Carlucci's management initiatives, reducing acquisition time while properly addressing technological risk reduction measures. The nation that put Man on the Moon within a decade certainly has the capability to field proven tiltrotor technology in 1991. The Secretary of the Navy, in his 8 March 1983 testimony before the Senate Armed Services Committee, noted that the Navy had specifically requested NASA to give a "second opinion" on JVX program technological risk. He noted that NASA's Ames Research Center, which knows more about tiltrotor technology than anyone else except the company that built the XV-15, had provided the Navy with a technical report, produced by the Powered Lift Flight Investigations Branch and endorsed by the Director of Aeronautics and Flight Systems. This report, which was included in that hearing's record, verified our position, indicating that the technical breakthroughs needed for JVX were behind us and that this risk was a "non-issue." It is noteworthy that the JVX Preliminary Design has been approved as a 23-month effort. The primary reason for this phase is to maximize risk reduction measures and avoid major technical problems in the Full Systems Development effort. Another important aspect was to enhance the competitive environment as the 23-month period was also intended to be attractive to potential competitors, such as Sikorsky, which had indicated, in a June 1982 letter to the Army, that it considered a 24-month effort prudent for its participation. As I have stated previously, the JVX development program is not sole-source. The Navy's RFP was fully open for any contractor who desired to compete for the program. With respect to cost, the Marine Corps' 1991 need is likely to save hundreds of millions of taxpayer dollars. Past defense aircraft developments have taken well over a decade, with much time and money spent on redundant testing and program stretch-outs to avoid near-year costs. Duplicative testing will be avoided by our joint test plan. The Marines' need will help avoid a stretch-out, sharply reducing inflationary growth. By joining resources and requirements for a common aircraft, total DOD development costs will be reduced; commonality in procurement will result in additional costs avoided by providing efficient production rates. In sum, we feel that the Marines' need has given us the necessary impetus to field this mature advanced technology, avoiding many unnecessary costs without adding significantly to technological risk.

HARM

QUESTION: In general the large quantity buys possible in joint programs have cost effectively supported two competing sources of production while also improving reliability. What is so unique about the HARM program which convinces you that a sole source strategy is in the best interest of the government?

ANSWER: The key factors in the assessment of the value of a second production source for HARM are:

1. Estimated cost of building the missile
2. Estimated cost of developing a second producer of HARM. The cost of setting up a second prime contractor would exceed $300 million in constant FY 82 dollars. This includes tooling, test equipment, an 18 missile qualification buy, and the marginal cost of buying 500 missiles in an education buy from the second source rather than purchasing these 500 missiles at the end of a sole source program.
3. Estimated effect of prime level competition on unit price based on historical data.
4. Cost control/reduction measures already in effect. The HARM program has already been structured to take effective advantage of competition. By 1985 96% (percent of material dollars) of the vendor level items will be procured competitively. Since these items will constitute about 80% of the HARM unit cost, the introduction of prime contractor competition would only find room for further cost reduction in the 20% of unit cost attributable to labor. In this area, however, Texas Instruments has committed to composite labor hour improvement curves for FY 85, FY 86 and FY 87. This commitment begins with FY 85 because Texas Instruments has provided quotations for FY 83, FY 84 and FY 85. These quotes, of course, provide the best form of cost control through FY 85.

When these factors were considered in the evaluation of the HARM program by the OSD Cost Analysis Improvement Group, the results showed that the Government could not get a return on investment with a planned procurement of approximately 17,000 missles. When this estimate is coupled with the projection that a successful development program of a reduced cost missile will significantly reduce the number of HARMs of today's design that we buy, there is little question that the development of a second source is not cost effective.

QUESTION: What assurances can you give that the sole source approach for HARM won't be increasingly more expensive as has been the case for the Phoenix program?

ANSWER: The principal cost control features of the HARM program that distinguish it from the PHOENIX program are:

1. Much higher production rate
2. Three-year not-to-exceed quotations
3. Guaranteed learning curves for labor rates through FY 87.
4. Vendor level competition on 96% of the material

for HARM by FY 85. The cost of material will represent 80% of the cost of HARM by FY 85.

5. Parallel RDT&E effort to develop a reduced cost seeker. Success in this effort, alone, is expected to reduce the cost of HARM buy at least 20%.

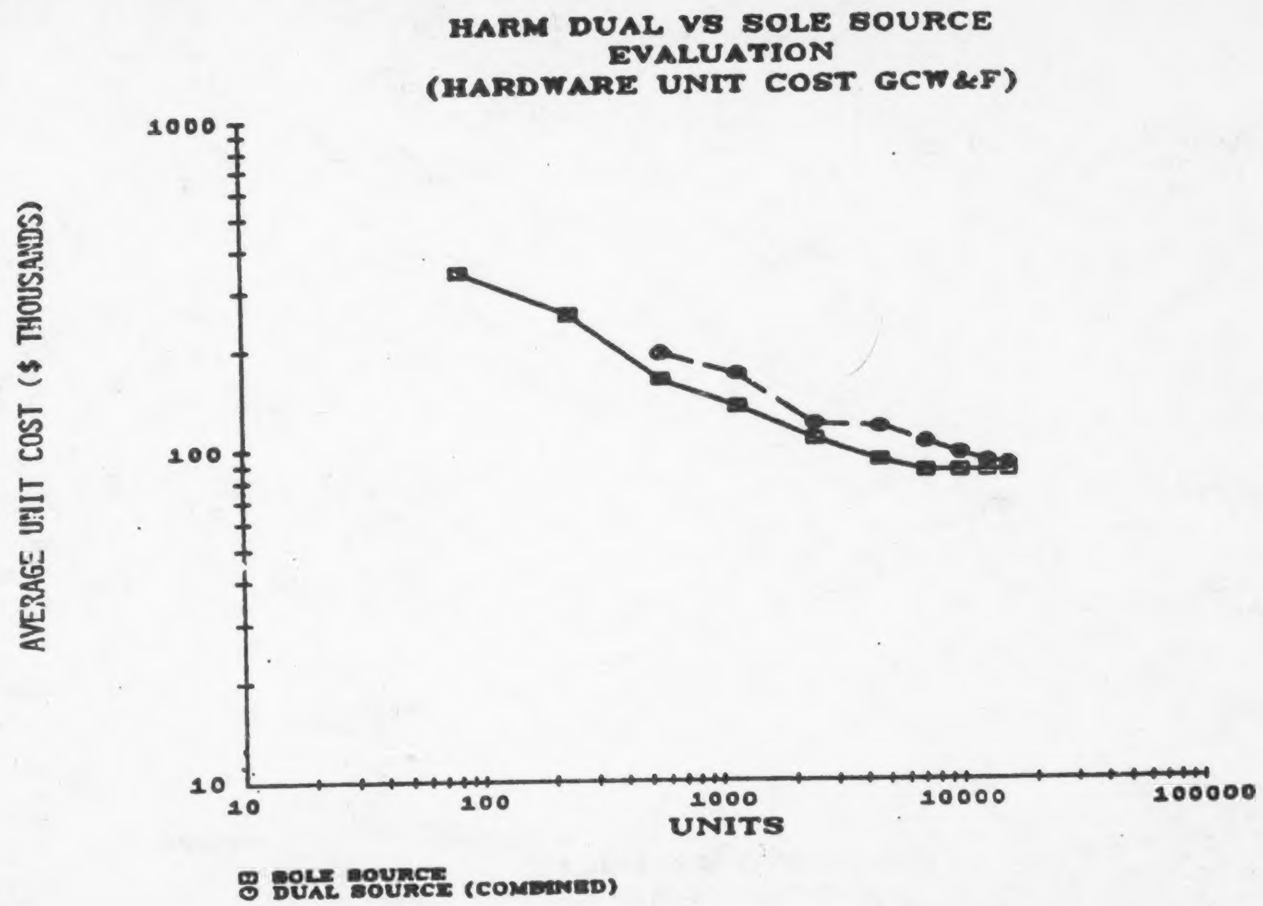
QUESTION: Provide for the record any detailed analysis which more clearly illustrates your point on this matter. Also provide a copy of the Navy and Air Force analysis on the second source strategy.

ANSWER: The DoD has selected the most cost-effective approach for satisfying the urgent requirement for HARM. This approach includes the use of competition for HARM components where analysis shows that there is a return on the investment that is required to develop the second source. In considering possible cost-control measures, the DoD completed a thorough analysis of the value and cost of developing a second source for the complete HARM. This analysis determined that the expenses associated with developing a second source for the complete missile could not be recouped by the Government during the anticipated production program.

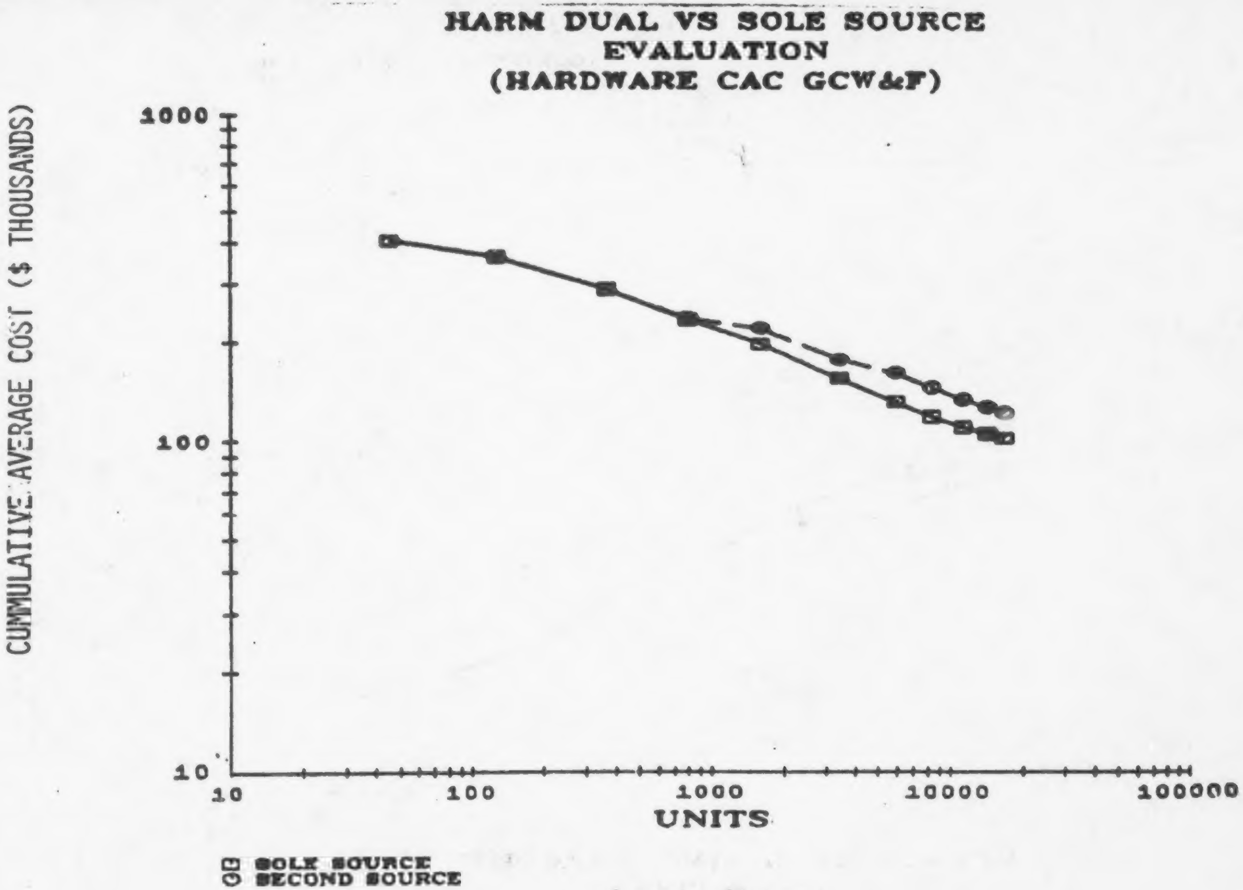
The OSD estimates that the cost of developing a second source for HARM exceeds $300 million. This cost includes tooling, test equipment, data, facilities, marginal recurring costs, and non-recurring costs (direct and amortized). Because of cost-control/cost reduction measures that have already been initiated in the HARM program, a return of the $300 million would require a production quantity in excess of 17,000 missiles. Figures that portray the results of the OSD analysis are provided as Attachments 1 and 2. Attachment 1 contrasts the average unit cost of a given lot of the HARM guidance, control, wing and fin (GCW&F) assembly for dual and single source acquisition. Attachment 2 contrasts the cumulative average cost of the GCW&F assembly for dual and single source acquisition.

The principal reason for the lack of any appreciable return on development of a second producer of HARM is clear. Of the three elements of the cost of HARM (direct labor, material and overhead) only the direct labor element might yield some additional savings to another HARM producer. The direct labor cost on HARM, however, is approximately 15% of the missile. Since there is no indication that this cost could be reduced significantly, program cost savings from prime competition could only be achieved with a much greater HARM quantity buy than currently planned. OSD examination of postulated scenarios in which the cost of developing a second source might be repaid with the procurement of less than 8,000 missiles has revealed the use of cost projections that are inconsistent with costs realized in past competitive missile procurement programs such as SPARROW (AIM-7F).

Although the development of a second HARM producer is not cost effective, current plans for procurement of


HARM DUAL VS SOLE SOURCE
EVALUATION
(HARDWARE UNIT COST GCW&F)
AVERAGE UNIT COST ($ THOUSANDS)
1000
100
10
10
100
1000
10000
100000
UNITS
SOLE SOURCE
DUAL SOURCE (COMBINED)

(FIGURE 1)


HARM DUAL VS SOLE SOURCE
EVALUATION
(HARDWARE CAC GCW&F)
CUMMULATIVE AVERAGE COST ($ THOUSANDS)
1000
100
10
10
100
1000
10000
100000
UNITS
⊞ SOLE SOURCE
⊙ SECOND SOURCE

(FIGURE 2)

HARM from Texas Instruments are supported by sound cost-control measures. The most significant features include: (1) vendor-level competition for procurement of 96% of the material cost of HARM, (2) firm-fixed-price proposal for the FY 83 procurement, (3) not-to-exceed-price quotations for FY 84 and FY 85, (4) a guarantee of additional 3-year quotes, and (5) a guaranteed 86% learning rate for manufacturing labor for FY 85 through FY 87. Notwithstanding the cost-control/cost-reduction measures that have been introduced into the HARM program, the HARM remains an expensive, albeit highly justified and critical, weapon. Fortunately, recent advancements in microwave technology provide an opportunity to develop a low cost seeker that should yield at least a 20% reduction in the cost of HARM.

Under the Anti-Radiation Projectile (ARP) program, the Naval Weapons Center, China Lake, California, has developed a demonstated stripline technology that could be used to eliminate about two-thirds of the parts count in the HARM seeker. While the development of this technology is justified solely on the basis of its potential utility in weapons other than HARM, we believe that an accelerated development effort would yield a reduced cost guidance section for HARM near the mid-point of the HARM program.

The Air Force did not accomplish a separate analysis, but evaluated the results of the Navy analyses. The Air Force did not disagree with the results of the Navy analysis completed in September 1982 that showed a dual source procurement of more than 17,000 missiles is required to recoup the cost of developing a second source. The Air Force did not agree with the results of the Navy analysis completed in March 1983 that showed a second source development is payed back with a procurement of less than 8000 missiles. The detailed Navy analysis will be provided separately by the Navy.

The near-term acquisition of HARM from Texas Instruments, coupled with the development of a reduced cost replacement for HARM, clearly provides the most effective use of competition and the greatest potential for cost control. Additionally, in the near term, this approach provides the highest HARM production rate for a given funding level.

QUESTION: Staff has been informed that the current prime contract for HARM will continue to provide fixed price quotes to the government if it remains in a single source environment. However, Secretary Weinberger's April 20 memorandum on the HARM missile clearly directs the establishment of a competitive environment. Short of signing a multi-year contract, what means does DoD have to assure that the firm fixed price offers proposed by Texas Instruments will in fact be offered once the Department moves to establish the sole-source program with a competitive environment?

ANSWER: DoD has formal assurance from Texas Instruments (TI) that three-year not-to-exceed quotations will be provided on a continuing basis so long as TI remains the single source for the HARM missile. This assurance is not limited by planned DoD actions to develop a reduced cost seeker in a competitive environment. Clearly at that point in time when TI must compete with another contractor for missile production, TI is not expected to provide three-year not-to-exceed quotes. At such point, however, competition will become a major cost control mechanism.

QUESTION: With respect to establishing this competitive environment, is the Department considering adding the new advanced radiation projectile guidance to the advanced medium range air to air missile (AMRAAM)? If so, how does that plan fit into the production strategy for the current HARM missile?

ANSWER: The feasibility of using the reduced cost seeker technology on missiles other than HARM is being considered by the Department. The potential operational utility and preliminary modest cost projections for these concepts suggest that the seeker technology will be applied to both HARM and other missiles. This likely application for the technology provides increased justification for development of the competitive low cost seeker and its potential application to other missile airframes such as AMRAAM. This influences our belief that by the late 1980s the inventory objective for the current version of HARM will be reduced from that of today. The effect of this on the production strategy for the current HARM missile is that it suggests an ultimate procurement quantity that would not possibly justify the development of a second prime source.

QUESTION: On the basis of the department's flip-flopping on the second source strategy for the HARM missile and waffling on the second sourcing of the Tomahawk all-up-round, what kind of a message are you trying to send to industry about the establishment of highly competitive second source production houses?

ANSWER: The Department of Defense intends to employ competition in those situations where our cost analyses indicate there will be a return on investment. The key factors, of course, are the size of the investment that must be made to establish the second source and the quantity of weapons that must be procured competitively to receive a return on investment. Since experience suggests that dual sources in production provide benefits in addition to price competition, such as improved product reliability, dual sources will even be favored in cases were a marginal dollar return on investment is indicated. This is clearly not the case of the HARM missile.

Competitive Second Source for HARM

QUESTION: I understand that the Navy is firmly convinced a competitive second source of production is the best way to proceed. They claim it will lower costs and improve reliability. Would you summarize their argument and tell us what's wrong with it.

ANSWER: Both the Navy and I are convinced that a competitive second source is the best way to proceed. Where the Navy and I differ is on what the second source should produce. The Navy's original approach was to take the present HARM design, qualify a second source to produce that missile, and then compete the remaining missiles to be bought between the two sources. I have two problems with this approach. First, as I said before, I had an independent cost estimate made by the CAIG and I believe that the investment required to put a second source into production is substantial and I doubt that we could break even. Second, as I have also said before, I believe that the present HARM missile is too expansive for us to attain our inventory objective. The best chance for us to bring the cost of the missile down is to finish developing the Navy's experimental seeker that China Lake has been working on. The Navy concurs that competition will bring the cost down. A second source for the HARM missile, as the Navy originally proposed it, would probably help to keep the program cost from escalating. Still, the initial investment is so high that we probably would not break even. However, I believe that with the alternate seeker we can actually bring the cost of the missile down and make it more affordable.

HARM

QUESTION: Why will HARM inventory objectives come down, as Dr. DeLauer testified.

ANSWER: The total Navy and Air Force inventory objective for HARM is approximately 17,000 missiles. This objective is influenced heavily by two items: (1) the military requirement for a capability to destroy enemy defenses and (2) the lack of another conventional weapon that is able to satisfy the requirement. As noted by Dr. DeLauer, the DoD acquisition strategy for HARM is designed to yield a reduced cost version of HARM. The availability of this reduced cost weapon would surely cause the Services to revise their inventory objectives for HARM missiles with today's design. However, the combined inventory objectives for various anti-radiation missiles, in total, would remain stable if threat projections and concepts for operational use of anti-radiation missiles have not changed.

JTACMS

QUESTION: Last year we supported the merger of the Army CSWS and Air Force CSW programs into the Joint Tactical Missile System program. We now understand that JTACMS is experiencing management and systems definition problems.

Have all JTACMS technical issues been resolved--such as weight, length and diameter?

ANSWER: There are not any exceptional management or system definition problems for JTACMS. We simply are going through the normal "growing pains" associated with a new joint Service program. The Army has been designated as the lead service and the AF has been supporting. The Services are working together in a joint office at the Army Missile Command, Huntsville, Ala. with support from other organizations. Some of the confusion on weight, length, and diameter may arise from the fact that in Assault Breaker we had two different missiles, the T-16 and T-22 with 16 and 22 inches diameter respectively and of different lengths and weights. Both systems did well and one may speculate as to which is best. The answer is not simple; there is a host of other requirements that must be met which may or may not impact size. These requirements have been analyzed to a great detail and are now documented in the JSOR. The final selection of missile weight, length and diameter will be made in light of industry proposals which address all requirements for JTACMS.

QUESTION: But you are requesting full scale development funds in FY 1984. Why should we give you the full budget request if JTACMS technical characteristics are unresolved?

ANSWER: Full scale engineering development will start in FY 84. The JTACMS requirements have already been defined in the JSOR and the Pre-FSD study with industry will be completed this year. There will not be any unresolved technical characteristics to preclude releasing an RFP in 84.

QUESTION: A second issue at work here is whether two services should have the second echelon/deep strike mission.

Shouldn't that mission be turned over to one service? Why not?

ANSWER: One has to examine the threat, targets and dynamics of battle to understand why both Forces (Air and Land) must be involved in second echelon/deep strike mission. As it turns out the most economic solution is a combination of both capabilities. For example, there could be situations when the threat is outside the range of a ground launched missile. In those situations one simply uses the aircraft for added range. Conversely, there will be situations where the threat to A/C may be such that it is wiser to use a ground launched missile. Furthermore, JTACMS has application for the AF strategic command aircraft for rapid deployment purposes in non-European theaters and in sea lane control missions. We do need both ground and air-launched capabilities.

JOINT TACTICAL MISSILE SYSTEM (JTACMS)

QUESTION: Doesn't the Army prefer a larger diameter weapon, rather than use a smaller weapon which causes it to lose range or payload?

ANSWER: Yes, the Army would prefer to develop a missile that would not degrade its range and payload requirements.

QUESTION: Would the T-22 Lance be one possible weapon?

ANSWER: Yes, the T-22 Lance could be a possible weapon to satisfy the Army's requirements. However, there are other missiles that could also satisfy the requirements.

PROBLEMS WITH SMALLER WEAPON

QUESTION: What problems would that pose for the Air Force? Doesn't the Air Force need a longer range standoff weapon for the PLSS mission?

ANSWER The Air Force is working with the Army to see if there are compromises that can be made and still meet the needs of both Services for a Tactical long-range Standoff Weapon.

The size and weight of the weapon and its compatability with different aircraft as well as target lethality and range are some important aspects.

The Air Force has a requirement for both short and long range standoff weapons. However, the long range system that best fills the weapons side of PLSS must be employed from fighter aircraft. The T-22 as used in the assault breaker demonstration does not meet that requirement.

JTACMS

QUESTION: What is the estimated development cost of JTACMS?

What were the estimated development costs of CSWS and CSW?

ANSWER: To develop capability in attacking SAM sites, Jammers, Tactical Ballistic missiles, soft vehicles, personnel headquarters, and in general, all soft-area-targets, total missile development cost is in the order of 900 million dollars. If each Service (Army-Air Force) developed their own separate system, that is CSW and CSWS, another $600 million would be required -about $750 million per Service.

TOMAHAWK

QUESTION: What do you think must be done within the 1983 contract to insure the technology transfer is successful?

ANSWER: In order to ensure success, close monitoring of the technology transfer process is required. Detailed qualification procedures, monitored by the project office and the principal support laboratory will be in place. Intensive testing of the various subsystems through the build process to the final assembly will ensure the integrity of the technology transfer process. The results will be utilized by the project office to determine how successful each contractor has been in achieving the specified technology transfer objectives as set forth in terms of the contract. Success or lack of success will impact up to 10 percent of the following year missile order quantities awarded. We are prepared to conduct this monitoring and are confident that the process will prove to be a viable concept in our attempt to produce missiles of the highest quality at the lowest possible cost.

QUESTION: The anti-ship version of the TOMAHAWK was decertified because of "end game anomalies" associated with final terminal maneuvers. Would you describe the problems encountered? Have the proposed fixes permitted recertification of the anti-ship version?

ANSWER: In August 1982, COMOPTEVFOR recommended that OPEVAL of the submarine launched Anti-Ship TOMAHAWK be suspended based on result of ten test flights. Of particular concern were [deleted]. In November 1982, CNO concurred in the suspension of OPEVAL. As a result, JCMP convened a [deleted] improvement task force whose recommendations regarding hardware and software modifications have been implemented for all future test flights. The JCMP has therefore recertified the Submarine Launched Anti-Ship TOMAHAWK weapon system ready for DT/OT.

TOMAHAWK/GLCM

QUESTION: What is the extent and nature of the "technical problems" encountered with the Transporter-Erector Launcher for the Ground Launch Cruise Missile. How much will these problems delay operational deployment or Europe? Can the FY 1984 budget be executed as requested?

ANSWER: There are no known technical problems with the Ground Launched Cruise Missile (GLCM) Transporter-Erector Launcher which will delay the operational deployment to Europe or impact execution of the FY 1984 budget.

MRASM

Question: If Navy participation in MRASM were to be terminated, shouldn't that be done in FY 1984, before work on the seeker and data link are carried further?

Answer: There is no seeker or data link development effort in the FY 1984 MRASM program. Navy resources in FY 1984 will be used for development work on common subsystems. The MRASM program was structured as a joint program to permit cost savings to be realized in the satisfaction of Navy and Air Force requirements that had common weapon development needs. The concept of a joint program is still valid. It would be inappropriate to terminate USN support of MRASM at this time since DoD is in the middle of an indepth assessment of all long range conventional standoff weapons. This assessment will lead to a recommendation on which programs to fund. It is anticipated that the DoD review will lead to a joint program regardless of the platform selected for the stand-off mission.

QUESTION. The Navy felt that MRASM was redundant of other programs with a higher priority. Does the Navy have a firm IOC for MRASM, or is this "still to be determined?"

ANSWER. The MRASM IOC is still to be determined.

QUESTION: If Congress were to zero the Navy portion of MRASM and direct termination of its participation in the program, shouldn't funds be added to the Air Force MRASM program to finish the development effort?

ANSWER: The MRASM program was established as a joint development by DoD with Air Force and Navy participation. Both Air Force and Navy funds are essential to the mission area. If the current DoD review of conventional stand-off weapons results in the selection of a platform other than MRASM, the MRASM funds will be reprogrammed to that platform.

JSTARS

QUESTION: Isn't it premature to be giving the Army and Air Force funds for full scale development and advance procurement of JSTARS in FY 1984?

ANSWER: No, the funding request is not premature. There is no dispute about what the constraints for the JSTARS radar designs are. As Dr. Cooper testified, the radar is to be identical for both Services and scaled and designed to go on the OV-1 for the Army and the TR-1 for the Air Force. There is also no argument about the design of the Army ground stations - the ground based asset which will provide us the early operational capability. Our highest priority in JSTARS, therefore, is to get on with this joint program so that we can achieve the early IOC. We need FY 84 money to start development of the radar and ground stations, and to procure long-lead GFE items and to start modification of the OV-1 aircraft.

PLRS-JTIDS HYBRID PROGRAM

QUESTION: What impact do recent shifts in the JTIDS program have on the development and production of the JTIDS Class II terminals, particularly that which will be added to the Position Location and Reporting System (PLRS)--also a joint Army-Marine Corps program?

ANSWER: There is no expected impact on the PLRS-JTIDS Hybrid program since the recent changes in the UHF anti-jam voice program will not effect the Air Force's development and production of the Time Division Multiple Access (TDMA) Class II JTIDS terminal.

QUESTION: Are the Air Force and Navy still developing separate JTIDS architectures?

ANSWER: Yes and no: the two JTIDS technologies in question have basic similarities as well as user-oriented differences. All the Services (i.e., Army and Marine Corps, as well as Air Force and Navy) are applying basic JTIDS techniques and architectural concepts to meet their similar operational requirements for high-capacity, secure and jam-resistant tactical information distribution. These include varying levels of data and voice communications, navigation/position-finding, and cooperative identification and use a common JTIDS pulse design with many common spectral features and processing algorithms, and the same frequency band. The basic JTIDS architecture provides for broadcast as well as discrete communication; jam-resistance is comparable for both technologies in most applications, and effective capacity is more a function of terminal class and modernity of design (i.e., platform-mission requirement) than system limitation.

JTIDS applications, on the other hand, should be considered as three major phases of activity, involving different participating communities: Class 1 (command terminal) TDMA programs, Class 2 (tactical terminal) TDMA programs, and the Class 1/1A/2 DTDMA program. The first two use the time-slotted TDMA approach; the third uses the interleaved-pulse DTDMA approach (as well as basic TDMA modes).

Class 1 TDMA terminals are in production now, and will begin operations during 1983-84 aboard NATO and USAF AWACS and their respective ground interface facilities; discrete users include the Air Force (E-3A and Adaptable Surface Interface Terminal/ASIT), NATO (E-3A and NADGE interface sites), the United Kingdom (UKADGE sites), and now the U.S. Army (ASIT). This deployment will provide an air-ground C^2 capability, using the interim IJMS message format and mature initial TDMA operating modes, for the rest of the 1980s.

Class 2 TDMA terminals have been in full-scale development for over two years and will begin operations aboard USAF F-15s, in USAF and Army ground facilities, and potentially in UK Tornado interceptors, during the late-1980s to extend air-land C^2 capabilities to tactical-mission forces. They will have expanded capabilities and use both the TADIL-J (NATO Link 16) joint message standard and the IJMS format (the latter temporarily, to facilitate transition of Class 1 TDMA/IJMS users to the joint/NATO message standard).

The DTDMA family of Class 1/1A/2 terminals has been in full-scale development for over one year and will begin operations aboard a wide range of Navy/Marine Corps tactical aircraft, combatant ships and ground facilities also starting during the late-1980s. They too will have expanded capabilities (commensurate with terminal capacity) to meet the multi-mission requirements of naval battle groups, and will use the TADIL-J message standard as soon as host-systems can upgrade their processing capabilities. The currently approved DTDMA terminals are dual-mode: they will use DTDMA techniques to meet naval requirements, but also use TDMA techniques for joint-mission interoperability.

All activities are well underway, to include appropriate progress in the integration of terminals into their host-systems, which requires platform-unique design and will comprise the major fraction of RDT&E costs. Terminal development costs are a minor fraction of the Class 2 TDMA and the DTDMA programs, and even their design approaches were selected to match operational concepts and generic platform interface factors of the user-Services. It is worth noting that the differing technical approaches of the terminals will cost little if any more than a single approach that would have needed significant modifications to meet individual Service requirements. For example, the Navy's multimission requirements would have required the addition of multiple transceiver capabilities to the existing Class 2 TDMA terminal, and platform-interface functions are treated differently in the Air Force/Army and Navy/Marine Corps terminals' designs. Thus, previous evaluations are reinforced today: any forced near-term standardization on a single technical architecture would forgo current investment (even more for an Air Force/Army/NATO change to DTDMA than for a Navy/Marine Corps change to TDMA-only), delay operational capabilities, compromise Service mission requirements, reduce technically competitive evolution and its production base, and (depending on the choice) impact NATO.

The Defense Department remains mindful of Congressional concern for possible program duplication and is continuing to emphasize jointly applicable technical advances. However, the current Department emphasis is being placed on terminal and message link interoperability, rather than universal hardware standardization. This should assure operational effectiveness for joint and combined JTIDS operations, achieved as soon as possible to correct existing C^3 deficiencies, but without curtailing long-term technical evolution that could further improve capabilities.

QUESTION: What efforts have been made to get the Air Force to begin using the Navy DTDMA architecture?

ANSWER: This question has been examined, as has its reciprocal: whether the Navy should use Air Force/Army TDMA technology. In light of the JTIDS program's evolution and individual Service requirements, the real question over standardization on a single JTIDS technological approach is: Are there sufficient cost and/or operational advantages to justify such a management decision? We have found neither.

To put this issue in perspective, it should be noted that the baseline JTIDS technique is TDMA. Class 1 TDMA terminals entered production in mid-1980 for the Air Force and NATO, and have since been procured by the United Kingdom and the Army; Class 2 TDMA terminals entered full-scale development in January 1981 for the Air Force and Army, and UK acquisition is now also in progress. Meanwhile, Navy DTDMA terminals, which entered full-scale development in January 1982, had been required to include TDMA for interoperability since 1980; this was reaffirmed at their Milestone II decision.

The basic TDMA technology is thus about seven years ahead of the more complex DTDMA technology in operational maturity, and it will continue to evolve to meet Air Force, Army and NATO requirements even while the DTDMA technology is being pursued in parallel to meet stated Navy and Marine Corps requirements. Thus, changeover by any or all of the TDMA users to DTDMA would involve major cost, schedule, technical, operational and political impacts for what the TDMA users consider significant risk and little operational advantage.

Similarly, the potential for Navy changeover to TDMA was examined before its Milestone II approval: while impacts were far less serious at that earlier stage in the DTDMA program's life, they were still judged too high to redirect the Navy's comprehensive and well-structured JTIDS program in an attempt to enforce "standardization" at the terminal and waveform level. Instead, the Department's JTIDS acquisition policy has been to require interoperability (via basic TDMA modes) even while supporting tailored Service programs to meet their differing specific requirements.

Recent OSD guidance has asked Air Force to evaluate the addition of a DTDMA capability to the E-3A AWACS, in view of that aircraft's value in support of maritime operations; findings are due late this year. However, it should be noted that this capability, if judged cost effective, would not be at the expense of TDMA and interoperability with other U.S. and NATO forces, and would also be keyed to Navy implementation of the TADIL-J joint message standard.

The Air Force's newly approved Enhanced JTIDS Antijam (AJ) Voice System (EJS), if approved at a Milestone II planned for FY 1984, also has a potential for increased interoperability with the Navy: While using the common JTIDS-pulse waveform, the EJS will use the DTDMA interval between pulses; if the Navy, in turn, modifies its JTIDS equipment to operate at the EJS's alternate frequency band, then future AJ voice interoperability may be attainable via EJS, while JTIDS data interoperability will continue via TDMA (and TADIL-J).

QUESTION: The Navy has added two new projects totalling $9.7 million to its JTIDS program which were not projected as being FY-1984 budget items last year. These are the Command and Control Processor and Link-11 Improvements.

Why can't these new projects be deferred until FY-85 or later?

ANSWER: Command and Control Processor (C^2P) and Link-11 Improvements were briefed last year as new R&D starts in FY-1984. Both programs are fundamental elements of the Navy's C^2 architecture and are carried under the existing JTIDS program element (PE) to preclude proliferation of numerous PEs and to permit grouping of tactical data related programs. The C^2P program is directly associated with JTIDS through TADIL-J while the Link-11 Improvement program complements JTIDS by providing anti-jam (AJ) capabilities for beyond line-of-sight (HF) data exchange.

Link-11 Improvements and C^2P projects are integral parts of the Navy C^2 architecture which will come on line in 1989. Neither program may be deferred without causing a slip in a wide number of related programs including JTIDS/TADIL-J/Advanced Combat Direction System (ACDS)/Afloat Correlation/Tactical Flag Command Center (TFCC) that make up the Navy Battle Force Management Plan. All programs within Battle Force Management Plan are fully funded by the Navy and require close coordination to avoid independent program slippages which would preclude 1989 IOC.

The Link-11 Improvement program is a Navy effort to upgrade capabilities of existing Link-11 in cooperation with NATO. NATO has approved a Mission Needs Document which requires implementation of significant improvement to Link-11 by 1988. An FY-1984 funding start is necessary for the U.S. Navy to satisfy its critical need for improved Link-11 and to meet the requirements of NATO.

An FY-1984 funding start for the C^2P program is essential to coordinate joint implementation of Link-16/TADIL-J with planned operational use of JTIDS in U.S. Navy ships by FY-1989. The C^2P is the linchpin interfacing JTIDS/TADIL-J directly with other major tactical systems including ACDS, Afloat Correlation,

and TFCC; and is the only planned means for interfacing tactical data between JTIDS/TADIL-J and NTDS (Link-11). The C^2P interface will also ensure interoperability between USN JTIDS ships, and NATO and other Allied Naval ships not equipped with JTIDS.

C^3 Programs

QUESTION: What percentage of command, control, communications programs are truly "joint" programs?

ANSWER: Slightly more than 41% of the total C^3 program of $16.7B or $6.8B is associated with joint programs.

QUESTION: Is our acquisition philosophy in the C^3I area evolutionary? Or are we trying to go out and develop entirely new systems on a joint Service basis?

ANSWER: Our acquisition philosophy for C^3I systems is and must be evolutionary, whether we are dealing with upgrades to existing systems--as in the HAVE QUICK program, which provided near-term anti-jam protection to ultra-high-frequency radios--or new initiatives, such as the Joint Tactical Information Distribution System (JTIDS) program--which entails evolutionary acquisition of various classes of user terminals and interface equipment, e.g., to couple JTIDS to the Army's Position Location and Reporting System (PLRS). In fact, such a philosophy is mandated by the Administration's initiative to improve the DoD acquisition process by emphasizing preplanned product improvement.

An evolutionary acquisition philosophy is mandatory because it is essential to both economic acquisition and force readiness. C^3I systems must be responsive to changing threats and evolving doctrine and tactics employed by our forces and to interoperability needs engendered by improving allied force control capabilities. Getting good C^3I equipment into the field in a timely manner so that users can gain experience with its use and capabilities is key to readiness. Attempts to design and field "ultimate" systems which can accommodate all future needs would only delay and increase the costs of acquisition, without any real assurance that future requirements could be met.

Joint Tactical Communications Office (TRI-TAC)

QUESTION: How many TRI-TAC Acquisition Programs are there? How does DoD ensure that duplication of communications equipment between the Services is eliminated?

ANSWER: There are 17 acquisition programs which have been tasked to the Services and National Security Agency for development and production. Within these 17 programs, there are 23 different equipment projects with individual schedules.

One of the primary objectives of the TRI-TAC Program is to eliminate duplication of tactical communications equipment, where feasible. This objective is specifically delineated in Department of Defense Directive 5148.7, the Joint Tactical Communications Program, dated 20 January 1978. The DoD accomplishes this objective via the responsibility vested in the Director, Joint Tactical Communications Office (JTCO) to coordinate and provide management direction for the development and production of TRI-TAC equipment. As part of this responsibility the JTCO reviews on-going Service tactical communications programs to ensure that duplication is avoided.

Light Armored Vehicles (LAV-25)

QUESTION: Secretary Weinberger noted in a letter that none of the light armored vehicles demonstrated a "suitable operationally effective turret" and that the problem seemed to be turret integration deficiencies which require adjustment to layout and positioning of control equipment. What progress has been made on this problem?

ANSWER: Some deficiencies in turret integration were noted during development and operational testing. The contractor, however, has upgraded the turret and corrected many of the deficiencies. Appropriate action is now underway to verify that the contractor has taken corrective action. A confirmation test period has been arranged at Aberdeen Proving Ground for June-September 1983. Test issues identified by the Army and USMC operational test agencies have been integrated into the basic test design plan. Operational crews as well as technical personnel will operate the LAV-25 to retest the conditions which caused the initial deficiencies. In addition to confirmation testing, initial production tests will be conducted by operational personnel on vehicles delivered in the October/November 1983 time period. An independent evaluator will evaluate both test periods, and the data generated will also be used by both operational test agencies to confirm that deficiencies have been corrected. The contractor is required by the terms of the contract to correct all deficiencies at no cost to the Government.

QUESTION: The Marine Corps proposes procurement of two new mission role vehicles in FY 1984, the anti-tank vehicle and the mortar vehicle, which have never been built. Describe the weapons that will be mounted on each of these vehicles and what testing has been done to date to confirm their readiness for production.

ANSWER: The anti-tank vehicle has a modified Emerson Electric (M901) weapon station with TOW II anti-tank guided missile (ATGM) capability. The M901 weapon system is off-the-shelf and requires only minimum changes for the LAV. The TOW system is operated by one man with the assistance from a loader. It will have an external mount capable of accepting either the M60 or M2 machine gun pintles, accessible through roof hatches at either the gunner's or commander's station.

The mortar carrier vehicle is a mobile indirect fire support vehicle which can fire the M29 81mm mortar from under armor protection. The mortar can be aimed, loaded, and fired from within the vehicle. A baseplate system will allow simple conversion from the 81mm to the 107mm on the field without special tools. This vehicle will also be equipped with a pintle mount to carry the M60 or M2 machine gun.

Both vehicles will have the M257 multi-barrel smoke grenade launcher externally mounted on the sides to launch L8A1 smoke grenade obscurants selectively controlled and fired from the commander's station.

No armament integration tests have been performed to date. DT/OT II tests are scheduled to start in August 1983 and conclude in February 1984.

QUESTION: What would be the impact on this program if the FY 1984 Army funding were denied, as proposed by the House Armed Services Committee?

ANSWER: The HASC cut defeats a Joint Army/USMC program that is supported by both Service Chiefs. FY84 begins the third year of a five-year multiyear contract. The contract requires that both the Army and USMC quantities of LAV-25 be called up simultaneously for each production year. Should this not occur, as the HASC mark would indicate, the contract would be voided and the Government would be liable for a cancellation charge of $31.4 million. In addition, if the Army is eliminated from the joint program, the potential for an affordable renegotiated contract based on USMC quantities is unlikely.

Joint Tactical Communications Office (TRI-TAC)

QUESTION: While there has been continuing cost growth in the TRI-TAC Communications Nodal Control Element (AN/TSQ-111), the Committee has learned of a fixed price Engineering Change Proposal which could add the control capability to all existing circuit switches (AN/TTC-39s) for slightly more than $110 million as opposed to at least a $500 million investment. Are you aware of this proposal for the AN/TTC-39A, and if so, shouldn't it be adopted and save some $3 billion over the total program? If not, why not?

ANSWER: An informal chart and text proposal submitted by GTE, as well as briefings by the Army Project Manager on a proposed AN/TTC-39A Nodal Control Circuit Switch, are being reviewed by the OSD staff to include the Joint Tactical Communications Office. We have not reviewed any formal proposal definitized in terms of a specification, cost and terms, and conditions.

As currently described in the chart and text proposal, the proposed AN/TTC-39A would not appear to provide adequate nodal management and technical control of the DOD's tactical transmission facilities.

The suggested $3 billion saving in 20 year life cycle costs for the Army is very questionable, in fact there may be no real savings at all. It is not clear at this time that all costs to the Army have been included and the effect on the other Services have not been taken into account in that the suggested modified AN/TTC-39A will not satisfy Air Force Nodal Control requirements.

The GTE concept is currently under review. It is expected that a decision on this will be made by mid August 1983.

QUESTION: How much is needed in FY 1984 by the Army and Air Force for the Communications Systems Control Element?

ANSWER: In FY 84 the Army's funding requirement for the Communications System Control Element (CSCE) is $19.3 million. The Air Force has no FY 84 funding requirement for the CSCE.

QUESTION: Were there any problems during the transfer of the project from the Air Force to the Army?

ANSWER: Procuring Service responsibility for the CSCE was transferred to the Army effective 1 February 1983. A period to effect the necessary transfer actions between the Services was established to achieve a smooth transition. During the period, there has been continuing coordination between the Army and Air

Force which has resulted in agreements on funding and technical personnel support services. In short, there have been no major insurmountable problems in transferring program responsibility.

QUESTION: Beginning this year, the Army has taken over management of the Communications Systems Control Element (CSCE) program. Does OSD now believe that CSCE is stable after its transfer from the Air Force to the Army?

ANSWER: Since the transfer of CSCE program management, the Army has been attempting to establish an adequate and affordable baseline system to perform the CSCE functions. Essential operating functions have been defined and the Army has under contract a program to automate these urgently needed functions using commercial hardware with maximum utilization of existing commercial software. The CSCE contract has been redefined since transfer of the program to the Army. The current CSCE program is to be incremental, initially providing only the most essential functions required by the field forces. This approach will result in the availability to the forces of needed automation earlier and at less cost than envisioned in the former CSCE effort. We believe the program is now stable and will proceed under Army leadership.

QUESTION: The award of the CSCE contract was made as a small business 8A set-aside. Is the CSCE Program still on schedule? Has there been any significant cost growth?

ANSWER: The Army has thus far defined only the first increment of the program and is on contract with the small business set-aside firm. The contractor has been given funding and personnel caps to insure that there will be no significant cost growth. By establishing an incremental program, each segment can be checked for operational capability and can be tested and fielded earlier than by awaiting completion of the entire product. The program is on schedule and has had no projected cost growth since being transferred to the Army.

QUESTION: For each of the following pieces of equipment, provide for the record the currently scheduled test period, production decision review date, and initial production contract award date: tactical digital facsimile (AN/UXC-4), advanced narrowband digital voice terminal (CY-3591), unit level circuit switch (AN/TTC-42 and SB-3865), unit level message switch (AN/GYC-7) and the single subscriber terminal (AN/UGC-137).

ANSWER: The requested information follows:

	Test Period*	Production Decision Review Date	Initial Production Contract Award Date
· Tactical Digital Facsimile (AN/UXC-4)	Jan-Apr 82	Aug 82	Aug 83
· Advanced Narrowband Digital Voice Terminal (CV-3591)	Jun83-Mar84	Jul 84	Jan 85
· Unit Level Circuit Switches (AN/TTC-42 & SB-3865)	Feb-Nov 83	Feb 84	Jun 84
· Unit Level Message Switch (AN/GYC-7)	Jul-Dec 84	Sep 86	Jan 87
· Single Subscriber Terminal (AN/UGC-137)	Jul-Nov 83	May 84	May 84

*Start/completion of Government Development Test/Initial Operational Test (DT/IOT)

QUESTION: After many schedule changes and nearly a decade in development, the Unit Level Circuit Switches will undergo government testing this year. What have been the results to date of the tests of the small 30-line switch and the 150-line switch and does it appear they are ready for production?

ANSWER: Testing will not be completed until November of this year, therefore it is too early to determine whether the switches are ready to go into production. Test results thus far have been satisfactory.

QUESTION: The Committee is also aware of a proposed fixed price product improvement to existing unit level switchboards (the SB-3614) which can provide about 80 percent of the capability of the 30-line unit level switch (SB-3865) at a savings estimated by the staff to be $130,000 per unit. As a cost savings or as an interim unit level switch, why should not this proposal be adopted?

ANSWER: The Army is considering a proposal to improve the existing small unit level switchboards (SB-3614). The modification to the SB-3614 switchboard would enhance its capability by allowing direct connections to AUTOVON and a tandem switch feature. However, even with these improvements the SB-3614 would not have the required subscriber features being designed into the SB-3865. The improved analog SB-3614 will not totally meet the Service-agreed requirements for the digital SB-3865 such as security, self-diagnostic capability, ease of maintenance, reliability, resistance to nuclear effects, self-contained multiplex groups and integral management of its data base.

It is understood that an improved SB-3614 could not be fielded until the 1987 timeframe which is a year later than the initial SB-3865s would be available. Additionally, data has not been provided which shows that logistics, manuals, training, possibly a dedicated teletypewriter, separate multiplexers, and other operation and support costs for the retrofit of existing switches has been included in arriving at the estimated $130,000 cost difference cited in the question.

QUESTION: With respect to the TRI-TAC acquisition program, provide a breakout by fiscal year and service of the number of items to be procured and the dollars programed for that purpose.

ANSWER: The breakout programed for in FY83-FY84 and FY85 is as follows:

	FY 83	FY 84	FY 85
ARMY			
AN/TTC-42	-	13	7
SB-3865	-	27	53
$(M)	-	$15.9	$16.0
AIR FORCE			
AN/TTC-42	-	6	12
SB-3865	-	-	50
$(M)	-	$4.3	$18.4
MARINE CORPS			
AN/TTC-42	-	19	20
SB-3865	-	38	126
$(M)*	$1.0	$30.8	$48.3
NAVY			
SB-3865	-	-	44
$(M)	-	-	$6.7
REDCOM**			
AN/TTC-42	-	1	-
SB-3865	-	5	-
$(M)	-	$1.6	-
TOTALS			
AN/TTC-42	-	39	39
SB-3865	-	70	273
$(M)	$1.0	$52.6	$89.4

*Includes Life Cycle Support procurement dollars.
**Funding for REDCOM requirements shared by the Army, Air Force and Navy.

Joint Services Small Arms Program

QUESTION: Does the Joint Services Small Arms Program really serve to promote commonality of service requirements and reduce development times? If so, why is it taking so long for us to field replacements for so many of our small arms weaponry?

ANSWER: The Joint Service Small Arms Program is a technology program focussed toward maintaining some limited small arms capability in the United States. In addition, it aggregates all of the technology funding in one Military Department rather than having each of the Military Departments support its own effort. Through this mechanism commonality of requirements is encouraged and if an operational requirement is promulgated developments times should be reduced.

Replacements for fielded small arms is based on developing operational requirements. Within available resources small arms do not have a high priority, thus, there are no current Engineering Development programs to replace fielded weapons. However, it should be re-emphasized the JSSAP is a technology base program, not an engineering development program.

QUESTION: The House Armed Services Committee added funds again this year to JSSAP. Do you believe that JSSAP is adequately funded?

ANSWER: The U.S. Army is the designated Executive Agent for the Department of Defense for the Joint Service Small Arms Program. They have programmed sufficient funds for FY84 to support the identified and agreed Joint Service technology program, but at a reduced pace. With the HASC mark-up FY84 funding will be slightly in excess of $9 million, which would provide for a more vigorous and timely program.

JOINT TACTICAL FUSION PROGRAM

QUESTION: The Joint Tactical Fusion Program is a congressionally initiated effort to combine Army and Air Force intelligence sensors and analytic centers into one "automated fusion" system.

What success are we having in developing a near term, limited fusion capability (as recommended by the GAO) that avoids a costly and lengthy development program?

ANSWER: In FY 1982, the Army, as executive agent for the Joint Tactical Fusion Program, initiated an intensive review of possible development options to meet the basic functional requirements and achieve an initial mid 80's capability. The results of this review included the following:

- Use currently available developmental systems to the maximum extent possible to provide a limited capability by FY 1985 or sooner.
- Implement a longer-term approach which will take advantage of rapidly changing automation capabilities.
- Building on the experience gained from the interim systems and by using available technology, develop the objective ASAS and ENSCE.

The near term program is based on currently available systems to the maximum extent possible so that a limited capability can be provided as new collection capabilities come online. Some systems have been or are about to be fielded and are discussed below. Further, some conceptual work is being pursued to determine what modifications or product improvements are necessary to gain the maximum benefit from these systems. For example, examination of LOCE technology and capability to satisfy Korean near-term fusion requirements is being pursued.

As part of the near term ongoing program, the Limited Operational Capability for Europe (LOCE) (based on the BETA testbed) has been deployed to address critical NATO shortfalls.

The system will derive information from various collection activities , [deleted]

[deleted]. .ne information is then combined to present a common depiction of the battle area to users, [deleted] [deleted]. LOCE reached IOC in December 1982. It was tested extensively in the Spring of 1983 during SHOCKWAVE and is currently being utilized to aid in intelligence production.

In similar fashion the Army is deploying the Technical Control and Analysis Center (TCAC) this year. The TCAC will integrate collected SIGINT data for Army field tactical units. Current planning is to deploy 14 TCAC shelters to Europe to provide an integrated intelligence network between the two Corps and four Divisions. The remaining 6 TCAC's will remain in CONUS for conceptual testing and evaluation (9th ID -3 TCAC's), operational deployment (XVIII Airborne Corps - 1 TCAC), and ongoing research and development (contractor - 2 TCAC's). Further, work is proceeding to upgrade the capability of the TCAC through Product Improvement Programs (PIP's) to make it more versatile. Subsequent realignment of the CONUS TCAC's is anticipated once testing and evaluation are complete. To gain the most operational benefit from the limited number of TCAC's available, procurement of some commercial hardware for training and developmental activities is being pursued since these costs are lower than for a fully militarized and ruggedized TCAC van. The Army has also initiated the MICROFIX activity to address near-term analyst needs by procuring commercial microcomputer hardware, such as Apple computers, for immediate fielding in tactical Military Intelligence units. It is intended to provide limited automation of selected individual intelligence functions by means of these dedicated single-user terminals. An ongoing software development effort will support the MICROFIX evolution.

To provide some intelligence support for HQ, USCENTCOM, a TCAC van was modified, the Korean Air Intelligence System (KAIS) message handling and data base management software installed, and the integrated system delivered in October 1982. Initial indications are that the system, called the Deployable Intelligence Data Handling System, is performing well.

The Air Force proposes to field a limited ENSCE using the BETA testbed for the 9th Air Force, continue LOCE operations and provide both hardware and software PIP's for these systems. Further, they plan to integrate the DC/SR capability and other functional requirements, where appropriate, to develop an improved, combined capability which addresses all TACC functions to the maximum degree possible in this interim approach.

It should be noted that these systems cannot provide the range of capabilities required for timely, accurate fusion of intelligence and related C^2 data. The purpose of developing interim systems is to provide a limited capability as soon as possible since the need is so urgent. These systems provide an initial operational baseline, the experience from which will be used in developing an objective system that can meet the requirements. It is expected that this developmental step-by-step approach will produce an objective system in the shortest time and for the lowest cost possible.

QUESTION: Are the Army and Air Force still able to meet their IOC dates (classified) for their fusion centers?

ANSWER: The FY 1984 funding profiles as shown in the President's Budget will not meet the IOC dates presently defined. However, this shortfall is being readdressed by the Services and favorable progress is being made. It is expected that final agreement on shared funding costs will allow attainment of the IOCs planned by the Joint Tactical Fusion Program Manager.

HIGH MOBILITY MULTIPURPOSE WHEELED VEHICLE

QUESTION: Recent operational tests of the joint service High Mobility Multi-purpose Wheeled Vehicle have surfaced some problems, with for example, the power train, light systems, structural welds and the suspensions, and the fording capability. What were the problems and what is being done to fix them?

ANSWER: Operational & Development Tests on the HMMWV prototypes were conducted during the period April 1982 through November 1982. The test strategy was to determine which of the candidate prototype vehicles had the potential to satisfy the tri-Service requirement, determine what fixes were required, require the participating contractors to make the fixes or propose the required changes for production vehicles, then competitively select from the qualified candidates the vehicle that best satisfied the Services requirements, price and other factors considered. Problems experienced during the operational testing were the same as those found during development testing. The results of testing along with contractor fixes were reviewed by a proposal evaluation board whose assessment was that no significant design changes were required, the contractors could meet performance requirements and the HMMWV would meet reliability goals. This assessment will be validated by a comprehensive test program beginning this summer and continuing thru FY 1984. Regarding the specific problems areas cited as pertaining to the winning contractor's vehicle:

oo **Power Train**: The commercial engines, transmissions & transfer cases (power train) performed well during both development & operational test. The very few failures experienced were judged to be random occurrences rather than systemic problems. During OT the winning contractor, AM General, experienced two engine failures (one due to a warped head gasket allowing coolant to enter a cylinder & one a turned crank shaft journal); two transmission failures (one due to a pump failure and one related to a transfer case failure of undetermined cause); and one transfer case failure related to the transmission failure (undetermined cause). The power train components in the AM General vehicle are commercially proven in use in the market place. Engine cooling system problems experienced during OT were corrected and tested satisfactorily at Yuma Proving Grounds, AZ.

oo **Light Systems**: The principal problems in the light systems were failures due to vibration of the standard light bulbs like those in use on other military trucks . The lights have been relocated and further insulated from shock & vibration. Other electrical system failures were attributable to the prototype nature of the system and were neither complex nor difficult to correct.

oo **Structural Welds**: Weld problems were experienced in a frame bracket and in the weapons carrier loader door area. The solution was to strengthen the bracket & change the body material used.

oo **Suspension**: Problems experienced with the aluminum hub castings and suspension arms were corrected by changing from aluminum to cast iron in the hub and changing the "A" arm weldments to stampings.

oo **Fording**: The specific fording problem was intrusion of over 2% water by volume into gear case sumps following fording tests. While the vehicles accomplished the fording tests the water intrusion was excessive. A number of changes were made to correct this problem such as better sealing around the speedometer cable, elimination of multiple vent tube joints and most importantly a slightly pressurized system using crankcase exhaust to prevent water intrusion into the transmission, transfer case, axle & geared hubs.

QUESTION: Will these fixes be tested before the vehicles enter production? If so, when?

ANSWER: Yes, the fixes will be tested prior to production in series of test scheduled to begin this summer. The contractor is required to refurbish developmental prototypes for a series of user doctrine tests which will provide early insight into the adequacy of the fixes. A shakedown test is scheduled for December of this year on six new pre-production vehicles to verify the fixes prior to Initial Production Testing. Additionally, the contractor has been conducting extensive testing on his own prototypes to assure successful performance.

STINGER

QUESTION: I understand that the postulated threat for the Stinger air defense missile has changed such that adjustments to the production program are being proposed. Within security constraints here, but fully in the record, explain what has changed.

ANSWER: Development of Stinger-POST began in 1977 to counter the threat known at that time. This threat assumed target aircraft would (d). In April 1982, the Army's Intelligence and Threat Analysis Center provided an updated threat assessment which identified the need [deleted].

QUESTION: In light of these changes, should full production be started on the Stinger-POST or should we move directly to a more capable version?

ANSWER: The Army previously identified an unfunded Product Improvement Program to upgrade the Stinger-POST with a reprogramable microprocessor to counter the currently postulated threat while concurrently providing the capability for subsequent changes as the threat evolves. Competing for funds under the Product Improvement Program process would significantly delay completion, resulting in the majority of the fielded weapons being either Basic Stingers or Stinger-POSTs. In order to expedite deliveries of Stinger-POST missiles upgraded with a reprogramable microprocessor (RMP), the Army has approved a program to concurrently develop and produce Stinger-POST (RMP). The program, however, would require transfer of fiscal year 1983 Stinger procurement appropriation funds into Research, Development, Test and Evaluation funds. If problems were encountered during the research and development phase of reprogramable microprocessor, the Army will have provisions in the contract to produce Stinger-POST without the reprogramable microprocessor.

Common Trainer Aircraft

QUESTION: What efforts are being made by OSD to encourage the Navy and Air Force to use common primary and advanced trainer aircraft?

ANSWER: OSD has made it very clear to the Services that current and future trainer aircraft programs must be structured to permit joint use of trainer aircraft. OSD action led to the current Air Force/Navy agreement on trainer aircraft. By continued oversight of service plans OSD intends to prevent duplication of effort on trainer aircraft.

AIRCRAFT TRAINER PROGRAMS

QUESTION: Is the Air Force now participating in the Navy NSARC on the VTX advanced Hawk trainer? Could the Air Force use the "dry" Hawk as a replacement for its T-38 sometime in the future?

ANSWER: The Air Force is planning to participate in the Navy's VTX Defense Systems Acquisition Review Council (DSARC). USAF plans for the future of pilot training do not require a T-38 replacement until well into the 21st Century. It is difficult to forecast training requirements so far into the future and the ability of present and future systems to meet those requirements cannot accurately be assessed at this time. The Navy trainer, however, will be considered as a candidate to replace the T-38 when the Air Force requirement is validated.

QUESTION: Does the Air Force have a Memorandum of Understanding with the Navy on trainer program?

ANSWER: Yes. A Memorandum of Understanding (MOU) on trainer programs was signed by the Air Force and Navy in May 1981. The MOU ensures that the two aircraft under development (the Air Force T-46 and the Navy VTX) will be capable of being used by both services should the need arise in the next few years.

QUESTION: Could the Navy possibly use the Air Force's next generation primary trainer now in development as a replacement for the T-34C?

ANSWER: Yes, it is possible. The Navy will evaluate the Air Force Next Generation Trainer (NGT) as a replacement trainer when the T-34C needs to be replaced.

Common Trainer Aircraft

QUESTION: Why can't we make progress in the area of common trainer aircraft for the Navy and Air Force?

ANSWER: Current requirements for new trainer aircraft do not correlate well on the calendar. A common primary trainer could only be deployed by premature phaseout of the Navy T-34C and a common advanced trainer could only be fielded by premature phaseout of the Air Force T-38. In both cases the cost of an unnecessary introduction of aircraft would far exceed any long term benefits that would be derived from the operation of common trainers. The goal of common trainer aircraft, therefore, must be seen as a long term goal that is attainable with proper planning today. This is the approach OSD has selected and is enforcing.

Medical R&D

QUESTION: How much success has there been in consolidating Service medical R&D efforts?

ANSWER: The Armed Services Biomedical Research Evaluation and Management (ASBREM) Committee and its component Joint Technical Coordinating Groups have done an excellent job since their establishment in 1981 in consolidating and coordinating the DoD medical R&D programs. The programs in infectious disease and military dentistry are now consolidated under the Army as lead agency in FY 83 and all funds are now programmed by the Army. The ASBREM mechanism recently prepared two reports to the HAC on combat casualty care and the proposed medical biological warfare defense industrial base programs. In addition, ASBREM is now the body which coordinates and presents the medical R&D programs for OSD program review.

QUESTION: How many joint technology coordinating groups have been established in the medical R&D area?

ANSWER: Seven joint technology coordinating groups are established to cover the following research areas; Infectious Diseases of Military Relevance, Military Dentistry, Medical Biological Warfare Defense, Combat Casualty Care, Ionizing Radiation, Medical Chemical Warfare Defense, and Systems Biotechnology.

SERVICE LASER PROGRAMS

QUESTION: Dr. Delauer, the House Armed Services and Appropriations committees annually recommend reductions to your service-wide directed energy programs, especially laser weapons R&D programs. The House Appropriations Committee has even gone so far as to recommend consolidation of directed energy programs under one organization. What is the OSD point of view?

ANSWER: We believe that the current management structure for the DoD High Energy Laser program to be the appropriate one. The current management structure consists of certralized oversight performed by the Assistant for Directed Energy Weapons in the Office of the Under Secretary of Defense for Research and Engineering, together with decentralized program planning and execution by the individual Services and the Defense Advanced Research Projects Agency. Recommendations for more centralized management seem to come from persons who perceive all lasers to be more or less the same. That is not the case. The laser is a generic technology, just as the missile is. Consolidated management makes no more sense for all laser programs than for all missile programs.

Laser programs in each of the Services are essential, in order that the Services' management hierarchies can play strong roles in the development and execution of program plans. This is particularly pertinent as concept feasibility is demonstrated in the next few years, so that orderly transition to weapon development programs can occur.

QUESTION: Aren't there many differences in Services mission requirements that mandate separate programs?

ANSWER: Yes. Just as the differences in the mission requirements of the Services mandate separate programs for aircraft, missiles, etc. they do also for laser weapons. Separate programs are especially important for an emerging technology. It is impossible for a weapon to be developed and fielded without support from the Service, and it is difficult, if not impossible, to develop support in a Service for a new technology unless that Service has played a major role in the maturation of that technology. More centralized management than we have already would take the Services' managment hierarchy out of the laser program to such a degree that their resulting lack of knowledge of laser technology would be a serious handicap to its eventual adoption in a weapon system development program. Integration of laser systems into various platforms such as aircraft, ships, tracked vehicles, or spacecraft all have very different requirements.

QUESTION: Is there any real opportunity to find savings by cutting this program? Just how much duplication is there?

ANSWER: We believe that the present management structure for the DoD High Energy Laser Program has eliminated all unnecessary duplication of effort. Instances frequently cited as examples of duplication are invariably the result of noting that similar descriptions apply to some portions of two different programs, without also noting their essential differences. These essential differences, however, are what dictate different programs.

HIGH MOBILITY MULTIPURPOSE WHEELED VEHICLE

QUESTION: I understand that the government has a fixed price contract requiring 1800 MMBF for the weapons carrier and 1900 MMBF for the utility vehicle. How will this performance be measured for the purposes of contract payment?

ANSWER: The contract requirement of 1800 MMBF for the weapons carrier and 1900 MMBF for the utility vehicles will be verified by a series of tests run at Aberdeen Proving Ground, MD. and Yuma Proving Ground, AZ. A MMBF will be calculated based on 20,000 miles of testing on each reliability test vehicle. Vehicles must be in compliance with the contract prior to their being accepted by the Army.

QUESTIONS SUBMITTED BY SENATOR D'AMATO

QUESTION: The Air Force informs me that providing only $20 Million as the House has recommended will cause a serious slippage in the initial operational capability date for Enhanced JTIDS. Indeed, you personnally wrote to Mr. Tony Battista on May 3, 1983, requested that ".... at least $20 Million" be provided"... to allow this urgently needed program to get underway." You imply that the full amount of the administration's budget request is needed to keep this program on schedule. Moreover, I understand that the Senate Armed Services Committee has approved the full amount of the budget request in its subcommittee mark-up. What impact will the House recommended level of funding have on the system's IOC date?

ANSWER: The level of funding provided by the House Armed Services Subcommittee mark-up would delay the Critical Design Review for Enhanced JTIDS by about one year. At this time it is not possible to translate this directly into a firm change of IOC dates since several parallel studies and analyses also tasked by the Secretary of Defense Decision Memorandum of May 9, 1983 have not been completed. However, a one year slip in IOC could be expected if all other factors remain constant.

QUESTION: I noted in my statement the previous interservice battles over anti-jam communications. Mr. Donald Latham on your staff has played a key role in events which have shaped the history of this program. He is now going to be responsible for implementing Secretary Weinberger's decision on how the department will proceed with its anti-jam communication program. As you are no doubt aware, he has personally been the focus of some serious conflicts. As you confident Mr. Latham will now implement the Secretary's direction fully and fairly?

ANSWER: Implementation of the Secretary of Defense Decision Memorandum on this subject was tasked to each of the Military Departments and the Organization of the Joint Chiefs of Staff for action. We are fully confident that the Deputy Under Secretary of Defense (C^3I), Mr. Donald C. Latham, will ensure that the Department of Defense critical requirements for jam-resistant tactical communications are fulfilled in an expeditious and cost-effective manner and that he will continue to provide the necessary management and oversight needed to accomplish this. To insure that this occurs, Mr. Latham has established an oversight group chaired by Dr. Thomas Quinn with senior representatives from each of the Services and the OJCS to make certain that the Secretary's direction is fully implemented.

QUESTION: What actions are you taking to insure that interservice rivalries over anti-jam communications, perhaps instigated by the JTIDS contractors, do not recur?

ANSWER: Actions assigned in the Secretary of Defense Decision Memorandum of May 9, on the Anti-Jam (AJ) Communications Program; DSARC-level Program Review are intended to resolve a number of long standing issues which have troubled the AJ communications arena for some time. To ensure timely completion of these action, we have set up a management oversight group composed of senior representatives from each of the Military Departments, and the Organization of the Joint Chiefs of Staff under the chairmanship of the Assistant Deputy Under Secretary (C^3) to provide a forum where technical, management or operational differences among the potential system users can be resolved by mutual agreement and compromise. Our intention is to prevent the escalation of minor differences to the point where they can be characterized as rivalries.

VTXTS

QUESTION: On another subject, I continue to be concerned over the Navy's VTXTS program. This is their advanced undergraduate jet flight training system. I know the Chairman of this Subcommittee has repeatedly stressed the need for commonality wherever possible in training aircraft. What is the Defense Department doing to insure that the Navy's efforts produce a trainer which can meet the Air Force's needs for a replacement for the T-38?

ANSWER: The Air Force is working closely with the Navy to ensure that the Navy's development efforts on the VTX aircraft reflect the Air Force's requirements. In so doing, the Department is ensuring that the design of the VTX does not have a fundamental problem which precludes its use as an Air Force trainer. On the other hand, since the Air Force has no need for a carrier qualified aircraft, should the Air Force find it necessary to use the VTX as a replacement for the T-38, there would be differences in the Air Force aircraft from the Navy aircraft. These differences will be defined and costed in the VTX program.

QUESTION: If the VTXTS aircraft, now designated the T-45, is not suitable for the Air Force role, do you envision another large scale trainer development program and yet another production line to meet the Air Force's legitimate requirement?

ANSWER: We do not envision a need for production lines for two advanced trainers. The VTX aircraft will be adaptable to the Air Force requirement for an advanced trainer for several years. As we have noted previously, however, the Air Force estimates that the T-38 will satisfy its advanced trainer requirements until at least the year 2000.

QUESTION: Do you believe that the heavy, subsonic, low performance T-45 is a realistic candidate to replace the supersonic, high performance T-38 in the Air Force inventory?

ANSWER: The T-45 will be a high performance trainer aircraft. Although it is subsonic, it would be a realistic candidate to replace the T-38 should the need arise.

QUESTION: To your knowledge, has there been any discussion between the Government of the United Kingdom and the United States regarding any production offset agreement involving the British Aerospace "HAWK"?

ANSWER: To my knowledge, there is no production offset agreement involving the British Aerospace "HAWK".

QUESTION: Has there been any exchange of correspondence between the British Ambassador and Secretary Weinberger on the subject of U.S. purchase of this aircraft?

ANSWER: Yes, there has been correspondence between the British Ambassador and Secretary Weinberger regarding the VTXTS program. In March 1982, Secretary Weinberger wrote a letter to the Ambassador expressing the Department's intentions to support the VTXTS program.

QUESTION: Are you satisfied with the firmness of the Navy's cost and schedule estimates on the VTXTS program?

ANSWER: OSD is awaiting the receipt of information that is required to assess the firmness of the Navy's cost and schedule estimates. We should have this information by September 1983.

QUESTION: The Navy represents that it has "budget quality estimates" of the costs of the VTXTS program. It further represents that it needs to proceed with what it calls a "two-phase program" involving purchase of "field carrier landing practice" aircraft as well as carrier capable aircraft. It states that this is so because of the additional requirement for front loading its research and development funding if it were to attempt to accelerate the carrier capable, or "wet" aircraft and delete the buy of the "field carrier landing practice", or "dry" aircraft. Yet, to purchase the "dry" aircraft, it must front load its procurement funds to the same extent. If the funding is comparable, do you see any difficulty in moving funds from their programmed use for procurement under a two-phase program to use for accelerated research and development under a single-phase program?

ANSWER: Since OSD has yet to evaluate the details of the Navy's VTXTS program structure, we cannot provide an endorsement of the two-phase program or comment on any funding difficulties which may be associated with a single-phase program. OSD expects to conduct a DSARC review of the VTXTS program no later than September 1983 and reflect the results of this review in the FY 1985 budget request.

QUESTION: Wouldn't a force of T-45s, all of which were carrier capable, provide the Naval Training Command with more flexibility at less cost?

ANSWER: Everyone agrees that the Navy would have greater flexibility if all T-45 aircraft were carrier qualified. However, OSD is not familiar with any data that shows it is less expensive to procure only carrier qualified aircraft.

QUESTION: Would you comment on the Navy's ability to convert a land-based aircraft to a carrier aircraft, based upon the Navy's historic record in such endeavors?

ANSWER: The Navy carefully evaluated the risk of making the HAWK aircraft carrier qualified during the competitive source selection process. The risk was judged moderate and technically acceptable. There is no doubt that the Navy has the ability to manage a successful development program.

SUBCOMMITTEE RECESS

Senator **Stevens**. The subcommittee will be in recess.

[Whereupon, at 12:05 p.m., Thursday, June 16, the subcommittee was recessed, to reconvene at the call of the Chair.]

DEPARTMENT OF DEFENSE APPROPRIATIONS FOR FISCAL YEAR 1984

TUESDAY, JUNE 21, 1983

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, D.C.

The subcommittee met at 10:05 a.m., in room SD-192, Dirksen Senate Office Building, Hon. Warren Rudman, presiding.

Present: Senator Rudman.

CONGRESSIONAL BUDGET OFFICE

STATEMENT OF ALICE M. RIVLIN, DIRECTOR, CONGRESSIONAL BUDGET OFFICE

ACCOMPANIED BY:

NORA SLATKIN, NATIONAL SECURITY STAFF, CONGRESSIONAL BUDGET OFFICE

ARMY MODERNIZATION PROGRAM

OPENING STATEMENT OF SENATOR RUDMAN

Senator RUDMAN. The subcommittee will be in order.

Our chairman, Senator Stevens, is at the White House, at the usual Tuesday morning leadership meeting, and it is running a little late. So with his permission, rather than keeping you all waiting, we are going to start the hearing, and he will take over when he gets here.

We are here this morning to inquire into the Army's modernization program and the substantial cost implications that stem from this effort to upgrade most of its major weapon systems. As usual, we are interested in exploring the validity of the Army's current budget estimates, but we are giving even more emphasis this year to the future budget requirements involved in the modernization effort. What Congress does today can have largely uncontrollable spending impact in the outyears at a time when Congress is being pressed to curb defense commitments.

Our leadoff witness will be Dr. Alice Rivlin, the Director of the Congressional Budget Office, for an update on Army modernization-cost projections. After a brief period for questions from the subcommittee, we will go to the Army's witnesses.

Dr. Rivlin, we are delighted to have you here this morning. You may proceed with your statement. Your complete statement will be printed in the record, of course, and you may summarize or deal with it, as you wish.

Ms. RIVLIN. Thank you very much, Mr. Chairman.

I am delighted to be here. I have with me at the table Nora Slatkin from the national security staff who did much of the work on this study.

Let me say at the outset that Nora and our entire staff have received terrific cooperation from the Army. I don't think we are going to say anything this morning that is a surpirse to the Army. We are going to talk a bit about the operating and support costs of modernization, a problem of which the Army is fully conscious, as I think you will hear later today. The Army is working on how to account for these costs and how to project them. They have been extremely cooperative in what we have tried to do here.

Our statement is not very long, and I think it would probably be best if I just read it.

OPERATING COSTS

Mr. Chairman, I appreciate the opportunity to testify on the operating costs associated with the Army's modernization program. At the request of this committee, the Congressional Budget Office has analyzed this important subject, and my testimony today presents the results of our inquiry.

The Army is modernizing its force with more than 180 new systems, many of which are substantially more sophisticated than today's versions. Our analysis has emphasized six of these systems, representing the primary new combat systems that the Army is fielding and the ones for which detailed data are available.

The analysis suggests that their operating and support costs will exceed those of antecedent versions by 45 to 70 percent in constant dollars. Indeed, there are indications that operating costs could increase substantially more, especially costs associated with the reserves and costs for spare parts and equipment overhauls.

The combat units operating these systems account for only 12 percent of the total operating and support budget. Thus, the increased costs of these particular systems can be readily funded within the growing Army budget, if other costs do not rise sharply. But if costs of other systems and support categories do grow sharply, the Army could have trouble paying the full bill for operating and support costs in the 1980's. Problems could be especially acute if, at the same time, available funds are cut in an attempt to hold down Federal budget deficits.

Our study, we think, points to a more fundamental problem, however. We found that, while the Army is hard at work implementing a highly sophisticated modernization program, it still lacks the techniques to project comprehensive estimates of future operating and support costs for the modernized Army. This is a critical problem, since the introduction of new systems today will lock the Army into a pattern of higher operating costs well into the next century.

The Congress could judge major new investment programs far better if it had the means to assess the implications of early design and program decisions for future operating and support costs. I shall conclude my testimony by outlining several methods that this subcommittee might adopt to enhance Defense Department management and congressional oversight of these important matters.

ARMY MODERNIZATION

Army modernization consists of the purchase of more than 180 new systems, ranging from the M-1 tank and Bradley fighting vehicle to trucks and communication gear. Most of the new systems will replace older ones used by active-duty forces, with the older equipment then going to the reserve forces.

Because time and data were limited, CBO concentrated on six major systems listed in table 1 in my prepared statement. We estimated the operating costs for a battalion—or company or battery where appropriate—rather than for individual systems because the Army is sometimes replacing older systems with fewer of the new systems. We assumed that battalions of both old and new weapons were structured according to the latest Army plan in order to eliminate the effects of organizational changes.

Modernization of battalions containing these systems will be under way in 1984 in many cases, but will not proceed at an equal pace for all systems. To provide a complete picture, CBO estimated costs at four stages: before any modernization, in 1984, in 1988, and at the completion of all modernization.

INCREASED OPERATING AND SUPPORT COSTS

The operating and support costs for the systems analyzed would have been $3.8 billion before any modernization, as you see from table 2. They will be $4.3 billion in 1984, rising to $5.4 billion in 1988 and $6.0 billion when all modernization is complete. Any inflation after 1984 would, of course, add to these figures. Tank battalions, mechanized battalions, and attack helicopter battalions will contribute by far the largest dollar increases because they are the most numerous.

Operating and support costs are funded by the Congress under three appropriations, as you see from table 3. Most of the increases would come in the operation and maintenance appropriation. Between 1984 and 1988, costs for operation and maintenance would increase by 78 percent. Procurement costs associated with the operating and support budget would increase by 42 percent. Military manpower costs would go up only 1 percent, suggesting that the six systems will not require any substantial increases in uniformed personnel.

These costs capture most types of operating and support expenses. They include all direct costs for maneuver battalions such as purchase of repair parts, fuel, and training ammunition, in addition to costs associated with military personnel in those units. Our estimates also include costs for depot maintenance, which is a particularly important component because of the more complex equipment being fielded today.

The estimates do not include operating and support costs that could not be related to the weapons, such as costs of training and base operations. In addition, other costs that are directly caused by modernization—such as redistributing displaced equipment to reserve forces—were not included.

FURTHER INCREASES POSSIBLE

Our analysis suggests that cost increases beyond those in table 2 are quite possible for the six systems. One source of further increases could be older equipment going to the reserves. The Army does not have data indicating operating tempo by type of equipment for the reserves. Nor are there publicly available plans indicating how many of the older weapons provided to reserve units will replace still older equipment, though planned expansion in the reserves suggests that most will supplement rather than replace items currently in the inventory.

Given the absence of public data, no firm estimates could be made of increased operating costs for the reserves. CBO did, however, estimate the increases of depot-level overhaul costs for the six types of new equipment going to the reserves, assuming that all of it augmented current numbers and that overhaul cycles were similar to those for active forces. In 1988, under these assumptions, added costs could be $560 million beyond the $1.1 billion shown in table 2.

Other increases could occur for replenishment spares—that is, the primary subcomponents used in major weapons, such as engines, transmissions, and gear boxes which are purchased through the procurement appropriation. The Army is planning for increases in replenishment spares to accommodate its more sophisticated gear, but it lacks a specific accounting method for projecting the requirements of weapon systems.

If costs of replenishment spares rise in proportion to those for procurement, they could add another $600 million a year by 1988. Moreover, the shortfall could be even larger because the CBO estimate does not include requirements generated by aging equipment.

Depot maintenance costs could also be higher than those incorporated in table 2. Major repair and overhaul of most items of equipment and primary subcomponents are accomplished in the extensive depot facilities operated by the Army and in commerical facilities under contract to the Army. The Army originally projected, using engineering estimates, that depot maintenance requirements for the M-1 tank would be about 370 percent higher than those for the M-60 tank, but recently it has revised the projection to over 1,100 percent, as is shown in table 4.

This is a potential cause for alarm since the Army continues to budget depot maintenance requirements for other systems on earlier engineering estimates. Engineering estimates for the fighting vehicle system, for example, show an increase of 238 percent over the older M-113. If experience with the M-1 is a guide, eventual depot maintenance requirements for the fighting vehicle system, and possibly other new systems, which are significantly more sophisticated than their antecedents, could well be substantially higher than those now anticipated.

Nor are these the only areas of possible increase beyond those estimated in table 2. The frequency of overhaul for the M-1 tank, and for some other weapons and components, has increased dramatically. This raises questions about whether enough transportation funds are available and whether the Army has adequate stocks of spare systems to allow uninterrupted training.

IMPLICATIONS FOR THE ARMY BUDGET

What are we to conclude from these findings? To the extent that cost increases are limited to the six systems analyzed by CBO, there is no particular cause for alarm. Although, as I have pointed out, they could be higher than we have shown. The operation and maintenance appropriation—which is the one most affected by the increases discussed in my testimony—would only have to grow by about 1 percent a year after inflation to fund the added costs associated with the six systems, if no other costs increased.

But other costs will increase, though CBO cannot estimate by exactly how much. Were operations and support costs for all items to grow at rates comparable to these six systems, the O&M appropriation would have to grow by about 5.4 percent annually after inflation. CBO projects that, under current Army budgetary plans, the O&M appropriation would increase an average of 5 percent annually, but the Congress clearly intends to provide a somewhat lower rate of growth for defense spending than that requested by the administration.

Indeed, the Senate version of the first concurrent resolution on the budget calls for real growth averging 5.5 percent over the 1984–86 period, compared with over 7 percent in the administration's plan. At this lower level of funding, the O&M appropriation for the Army would grow an average of 3 percent per year or less.

This six systems alone will consume up to one-third of all real growth in the Army operations and maintenance account. Obviously, other systems will also entail higher operating costs, although we cannot conclude from our study whether the six systems analyzed represent a general trend. This points to a more fundamental problem that needs to be addressed.

IMPLICATIONS FOR CONGRESSIONAL ACTION

Our anlaysis has highlighted two areas in which we believe there is a significant need to improve current management procedures regarding Army modernization.

First, the Army needs to develop the means to forecast a more comprehensive picture of likely future cost increases; and

Second, attention needs to be given much earlier in the modernization and development process to the future operating and support costs implications of early design decisions.

CBO analysts have devoted a substantial amount of time during the past 6 months to working with the Army representatives responsible for various aspects of the modernization program. The Army is diligently trying to implement the best program possible. It has instituted several important new managerial procedures and tools to facilitate the modernization process. We found, however, that current accounting systems impede rather than facilitate the development of a comprehensive picture of future costs.

For example, the Army lacks an accounting procedure to estimate procurement-funded replenishment spares for its major new weapon systems, which, as noted before, constitute a substantial component of higher future operating costs. Similarly, the impact of equipment redistribution on the costs of reserve component forces in not fully known.

The massive scope of modernization of more than 180 systems, together with the limits of current management tools, makes it difficult to develop a comprehensive picture of future costs. The Army has recognized some of these problems and is working to address them. In the interim, the subcommittee might wish to direct the Army to develop a more comprehensive picture of likely increases in operating costs—for example, by using proxy measures such as the percentage increase in procurement costs—until more detailed forecasting methods can be developed.

The second major area that we feel presents a general need for improvement is the systematic reporting of projected operating and support costs associated with major new combat systems. At present the Congress receives detailed information on major procurement items through the selected acquisition reports. While the SAR includes the development and procurement costs associated with new systems, it does not include the operating and support cost estimates for those systems. This is unfortunate since the operating costs of a system far outweigh the investment costs. For example, an M-1 tank will cost $2.6 million in 1984, but it will entail $10 million in operating and support costs over the 20 years it will be in service.

Obviously, it is important to estimate operating and support costs of major systems as early as possible, noting the impact that design changes and program changes might have on those operating costs. Small design changes could dramatically affect long-term costs, though at present there is no systematic way to evaluate these changes.

Should the Congress wish to follow this approach, it could direct the Department of Defense to incorporate an operating and support annex for each of the systems reported in the existing SAR entries. Such an annex should identify a baseline for major operating and support elements, such as the annual operating tempo, the concept and design goals for maintenance, projected annual stock-funded and procurement-funded spare parts requirements, projected annual depot maintenance requirements, and so forth.

Design changes that affect projected operating and support costs could be reported, just as the changes that affect procurement costs. Such an approach would provide the Congress with an early benchmark for future operating costs and would highlight the issue of operating and support costs early in the design process for new systems.

This information is developed in various forms by the services on an ongoing basis, and reporting it to the Congress would not represent a significant burden on the Department of Defense. Should the subcommittee adopt this approach, CBO would be pleased to assist in helping to develop the presentational framework for the operating and support elements.

Both of these initiatives, Mr. Chairman, would substantially improve the information provided to the Congress on this important issue. While both entail substantial work, we believe that the management attention that the Army devotes to these issues now and the time the subcommittee invests in this important area will be repaid handsomely.

Thank you, Mr. Chairman.

[The prepared statement of Ms. Rivlin follows:]

PREPARED STATEMENT OF ALICE M. RIVLIN

DIRECTOR

CONGRESSIONAL BUDGET OFFICE

CONGRESSIONAL BUDGET OFFICE REVIEW OF OPERATING AND SUPPORT COSTS FOR ARMY MODERNIZATION

Mr. Chairman, I appreciate the opportunity to testify on the operating and support costs associated with the Army's modernization program. At the request of this Committee, the Congressional Budget Office (CBO) has analyzed this important subject, and my testimony today presents the results of our inquiry. The Army is modernizing its force with more than 180 new systems, many of which are substantially more sophisticated than today's versions. Our analysis has emphasized six of these systems, representing the primary new combat systems that the Army is fielding and the ones for which detailed data are available. The analysis suggests that their operating and support costs will exceed those of antecedent versions 45 to 70 percent in constant dollars. Indeed, there are indications that operating costs could increase substantially more, especially costs associated with the reserves and costs for spare parts and equipment overhauls.

The combat units operating these systems account for only 12 percent of the total operating and support budget. Thus, the increased costs of these particular systems can be readily funded within the growing Army budget, if other costs do not rise sharply. But if costs of other systems and support categories do grow sharp, the Army could have trouble paying the full bill for operating and support costs in the 1980s. Problems could be especially acute, if, at the same time, available funds are cut in an attempt to hold down federal budget deficits.

Our study, we think, points to a more fundamental problem, however. We found that, while the Army is hard at work implementing a highly sophisticated modernization program, it still lacks the techniques to project comprehensive estimates of future operating and support costs for the modernized Army. This is a critical problem, since the introduction of new systems today will lock the Army into a pattern of higher operating costs well into the next century.

The Congress could judge major new investment programs far better if it had the means to assess the implications of early design and program decisions for future operating and support costs. I shall conclude my testimony by outlining several methods that this Subcommittee might adopt to enhance Defense Department management and Congressional oversight of these important matters.

ARMY MODERNIZATION PROGRAM

Army modernization consists of the purchase of more than 180 new systems, ranging from the M1 tank and Bradley Fighting Vehicle to trucks and communication gear. Most of the new systems will replace older ones used by active-duty forces, with the older, equipment then going to the reserve forces.

TABLE 1.—ARMY MODERNIZATION SYSTEMS ANALYZED BY CBO AND PROJECTED INCREASES IN UNIT OPERATING COSTS

Organization unit	Number and type of weapons per unit		Percentage increases in unit operating costs
	Premodernized	Modernized	
Tank battalion	58 M60A3	58 M1	69
Mechanized battalion	76 M113	60 FVS	45
Air Defense artillery battalion	24 Vulcan	36 DIVAD	49
Multiple launch rocket system battery	NA	9 MLRS launchers	NA
Attack helicopter battalion	21 AH-1S	18 AH-64	60
Combat support aviation company	23 UH-1	15 UH-60	46

NA=Not applicable.

Because time and data were limited, CBO concentrated on six major systems listed in Table 1. We estimated the operating costs for a battalion (or company or battery were appropriate) rather than for individual systems because the Army is sometimes replacing older systems with fewer of the new systems. We assumed that battalions of both old and new weapons were structured according to the latest Army plan (the so-called Division 86 plan), in order to eliminate the effects of organizational changes.

Modernization of battalions containing these systems will be under way in 1984 in many cases, but will not proceed at an equal pace for all systems. To provide a complete picture, CBO estimated costs at four stages: before any modernization, in 1984, in 1988, and at the completion of all modernization.

INCREASED OPERATING AND SUPPORT COSTS

The operating and support costs of fully modernized battalions of these six systems will be substantially higher than those of current battalions. In terms of fiscal year 1984 dollars, increases will range from a low of 45 percent for mechanized battalions (where the new Fighting Vehicle System replaces the old M113) to 69 percent for tank battalions (where the M1 replaces the M60A3). One of the systems analyzed, the Multiple Launch Rocket System, has no comparable antecedent system.

Total operating and support costs for the systems analyzed would have been $3.8 billion before any modernization (see Table 2). They will be $4.3 billion in 1984, rising to $5.4 billion by 1988 and $6.0 billion when all modernization is complete. Any inflation after 1984 would, of course, add to these figures. Tank battalions, mechanized battalions, and attack helicopter battalions will contribute by far the largest dollar increases because they are the most numerous.

TABLE 2.—OPERATING AND SUPPORT (O&S) COSTS FOR A MODERNIZING ARMY

[In millions of fiscal year 1984 dollars]

Organizational unit	Number of units[1]	Premodernization costs	1984 costs	1988 costs	Costs at completion
Tank battalion	74	$1,470	$1,640	$2,030	$2,300
Mechanized battalion	46	900	1,000	1,150	1,240
Air defense artillery battalion	14	250	260	340	360
Multiple launch rocket system battery	26	0	40	160	160
Attack helicopter battalion	67	750	750	1,020	1,300
Combat support aviation company	61	480	650	700	620
Total		3,800	4,300	5,400	6,000
Increase over 1984				1,100	1,600

[1] In numbers of equivalents.

Note: Totals may not add because of rounding.

Operating and support costs are funded by the Congress under three appropriations (see Table 3). Most of the increases would come in the operation and maintenance appropriation. Between 1984 and 1988, costs for operation and maintenance would increase by 78 percent. Procurement costs associated with the operating and support budget would increase by 42 percent. Military manpower costs would go up only 1 percent, suggesting that the six systems will not require any substantial increases in uniformed personnel.

TABLE 3.—RECURRING O&S COSTS OF MODERNIZATION BY APPROPRIATION

[In millions of fiscal year 1984 dollars]

Appropriation account	Premodernization costs	1984 costs	1988 costs	Costs at completion
Operation and maintenance	$550	$860	$1,530	$1,910
Percent above 1984			78	120
Procurement	$660	$850	$1,200	$1,380
Percent above 1984			42	63
Military personnel	$2,630	$2,630	$2,660	$2,700
Percent above 1984			1	2

TABLE 3.—RECURRING O&S COSTS OF MODERNIZATION BY APPROPRIATION—Continued

[In millions of fiscal year 1984 dollars]

Appropriation account	Premoderni-zation costs	1984 costs	1988 costs	Costs at completion
Total	$3,800	$4,300	$5,400	$6,000

Note: Totals may not add because of rounding.

These costs capture most types of operating and support expenses. They include all direct costs for maneuver battalions such as purchase of repair parts, fuel, and training ammunition, in addition to costs associated with military personnel in those units. Our estimates also include costs for depot maintenance, which is a particularly important component because of the more complex equipment being fielded today. The estimates do not include operating and support costs that could not be related to the weapons, such as costs of training and base operations. In addition, other costs that are indirectly caused by modernization—such as redistributing displaced equipment to reserve forces—were not included.

FURTHER INCREASES POSSIBLE

Our analysis suggests that cost increases beyond those in Table 2 are quite possible for the six systems. One source of further increases could be older equipment going to the reserves. The Army does not have data indicating operating tempo by type of equipment for the reserves. Nor are there publicly available plans indicating how many of the older wespons provided to reserve units will replace still older equipment, though planned expansion in the reserves suggests that most will supplement rather than replace items currently in the inventory. Given the absence of public data, no firm estimates could be made of increased operating costs for the reserves. CBO did, however, estimate the increases of depot-level overhaul costs for the six types of new equipment going to the reserves, assuming that all of it augmented current numbers and that overhaul cycles were similar to those for active forces. In 1988, under these assumptions, added costs could be $560 million beyond the $1.1 billion shown in Table 2.

Other cost increases could occur for replenishment spares—that is, the primary subcomponents used in major weapons, such as engines, transmissions, and gear boxes which are purchased through the procurement appropriation. The Army is planning for increases in replenishment spares to accommodate its more sophisticated gear, but it lacks a specific accounting method for projecting the requirements of weapon systems. If costs of replenishment spares rise in proportion to those for procurement, they could add another $600 millin a year by 1988. Moreover, the shortfall could be even larger because the CBO estimate does not include requirements generated by aging equipment.

Depot maintenance costs could also be higher than those incorporated in Table 2. Major repair and overhaul of most items of equipment and primary subcomponents (such as engines) are accomplished in the extensive depot maintenance facilities operated by the Army and in commercial facilities under contract to the Army. The Army originally projected, using engineering estimates, that depot maintenance requirements for the M1 tank would be about 370 percent higher than those for the M60 tank, but recently it has revised the projection to over 1,100 percent (see Table 4). This is a potential cause for alarm since the Army continues to budget depot maintenance requirements for other systems on earlier engineering estimates. Engineering estimates for the Fighting Vehicle System (FVS), for example, show an increase of 238 percent over the older M113. If experience with the M1 is a guide, however, eventual depot maintenance requirements for the Fighting Vehicle System, and possibly other new systems, which are significantly more sophisticated than their antecedents, could well be substantially higher than those now anticipated.

TABLE 4.—POTENTIAL UNDERSTATEMENT OF DEPOT MAINTENANCE BURDEN FOR SOME NEW SYSTEMS

Weapon system	Percent of inventory through annual overhaul	Annual maintenance manhours per weapon	Percentage increase from premodernized to modernized system
M60 Tank	2	2,024	......
M1 (engineering estimate)	5	3,830	373
M1 (latest estimate)	13	3,830	1,130
M113 armored personnel carrier	7	830	......
FVS (engineering estimate)	4	4,917	238

Note: The latest estimate of the depot maintenance burden for the M1 tank shows a significant increase over the engineering estimate. The engineering estimates of other new systems, such as the FVS, might possibly be understated as well.

Nor are these the only areas of possible increase beyond those estimated in Table 2. The frequency of overhaul for the M1 tank, and for some other weapons and components, has increased dramatically. This raises questions about whether enough transportation funds are available and whether the Army has adequate stocks of spare systems to allow uninterrupted training.

IMPLICATIONS FOR THE ARMY BUDGET

What are we to conclude from these findings? To the extent that cost increases are limited to the six systems analyzed by CBO, there is no particular cause for alarm. The operation and maintenance (O&M) appropriation—which is the one most affected by the increases discussed in my testimony—would only have to grow by about 1 percent a year after inflation to fund the added costs associated with the six systems, if no other costs increased.

But other costs will increase, though CBO cannot estimate by exactly how much. Were operations and support costs for all items to grow at rates comparable to these six systems, the O&M appropriation would have to grow by about 5.4 percent annually after inflation. CBO projects that, under current Army budgetary plans, the O&M appropriation would increase an average of 5 percent annually, but the Congress clearly intends to provide a somewhat lower rate of growth for defense spending than that requested by the Administration. Indeed, the Senate version of the First Concurrent Resolution on the Budget calls for real growth averaging 5.5 percent over the period, compared with over 7 percent in the Administration's plan. At this lower level of funding, the O&M appropriation for the Army would grow an average of 3 percent per year or less. These six systems alone will consume up to one-third of all real growth in the Army operations and maintenance account. Obviously, other systems will also entail higher operating costs, although we cannot conclude from our study whether the six systems analyzed represent a general trend. This points to a more fundamental problem that needs to be addressed.

IMPLICATIONS FOR CONGRESSIONAL ACTION

Our analysis has highlighted two areas in which we believe there is a significant need to improve current management procedures regarding Army modernization.

First, the Army needs to develop the means to forecast a more comprehensive picture of likely future cost increases; and

Second, attention needs to be given much earlier in the modernization and development process to the future operating and support cost implications of early design decisions.

CBO analysts have devoted a substantial amount of time during the past six months to working with Army representatives responsible for various aspects of the modernization program. The Army is diligently trying to implement the best program possible. It has instituted several important new managerial procedures and tools to facilitate the modernization process. We found, however, that current accounting systems impede rather than facilitate the development of a comprehensive picture of future costs. For example, the Army lacks an accounting procedure to estimate procurement-funded replenishment spares for its major new weapon systems, which, as noted before, constitute a substantial component of higher future operating costs. Similarly, the impact of equipment redistribution on the costs of reserve component forces is not fully known.

The massive scope of modernization of more than 180 systems, together with the limits of current management tools, makes it difficult to develop a comprehensive picture of future costs. The Army has recognized some of these problems and is working to address them. In the interim, the Subcommittee might wish to direct the Army to develop a more comprehensive picture of likely increases in operating costs—for example, by using proxy measures such as the percentage increase in procurement costs—until more detailed forecasting methods can be developed.

The second major area that we feel presents a general need for improvement is the systematic reporting of projected operating and support costs associated with major new combat systems. At present the Congress receives detailed information on major procurement items through the Selected Acquisition Reports (SAR). While this includes the development and procurement costs associated with new systems, it does not include the operating and support cost estimates for those systems. This is unfortunate since the operating costs of a system far outweigh the investment costs. For example, an M1 tank will cost $2.6 million in 1984, but it will entail $10 million in operating and support cost over the 20 years it will be in service. Obviously, it is important to estimate operating and support costs of major systems as early as possible, noting the impact that design changes and program changes might have on those operating costs. Small design changes could dramatically affect long-term costs, though at present there is no systematic way to evaluate these changes.

Should the Congress wish to follow this approach, it could direct the Department of Defense to incorporate an operating and support annex for each of the systems reported in the existing SAR entries. Such an annex should identify a baseline for major operating and support elements, such as the annual operating tempo, the concept and design goals for maintenance, projected annual stock-funded and procurement-funded spare parts requirements, projected annual depot maintenance requirements (in terms of miles or hours between overhauls and maintenance manhours per system), and so forth. Design changes that affect projected operating and support cost could be reported, just as are changes that affect procurement costs. Such an approach would provide the Congress with an early benchmark for future operating costs and would highlight the issue of operating and support costs early in the design process for new systems. This information is developed in various forms by the services on an ongoing basis and reporting it to the Congress would not represent a significant burden on the Department of Defense. Should the Subcommittee adopt this approach, CBO would be pleased to assist in helping to develop the presentational framework for the operating and support elements.

Both of these initiatives, Mr. Chairman, would substantially improve the information provided to the Congress on this important issue. While both entail substantial work, we believe that the management attention that the Army devotes to these issues now and the time the Subcommitee invests in this important area will be repaid handsomely.

ADEQUACY OF 1984 O&S REQUEST

Senator **Rudman**. Thank you very much, Dr. Rivlin.

Let me ask you a question more immediate than long range, which is what your excellent testimony points to. On the basis of what you have testified to this morning, have you drawn any conclusions about the adequacy of the 1984 O&S request?

Ms. **Rivlin**. I think the problems relate to the longer term more than to 1984, but let me ask Nora to elaborate on that.

Ms. **Slatkin**. Senator, without having the program element level of detail available to look at all these systems in depth regarding the fiscal year 1984 request, it is almost impossible for me to answer that.

Having looked at this over the past 6 months, I would only speculate that given the dollar value that we are discussing here, and given the real growth that is in the administration's program, if the Army has not fully budgeted for all of these cost elements, it would not be difficult to accommodate them for these six systems.

Senator **Rudman**. For these six systems, but obviously as you look across the span of what we are talking about here, there could be a shortfall, I assume. In fact, those of us on the subcommittee have suspected that there might be.

What you are saying is that based on what you have done, you can only fairly state that these six systems could probably be accommodated, but we don't really know how much beyond that.

Ms. **Slatkin**. Yes.

REAL GROWTH IN PROCUREMENT OUTLAYS FOR PRIOR YEAR COMMITMENTS

Senator **Rudman**. Dr. Rivlin, previous work that you have done for the committee, and other committees, demonstrated a very real growth in the procurement outlays for prior year commitments, from about 31 percent in fiscal 1983 to over 43 percent in 1988.

Now you are telling us essentially that we are going to see the same kind of growth in the operating and support costs during the same period. Do you link those two together in any way. Do you think that the second is a result of something that happened in the first?

Ms. **Rivlin**. Not exactly, although they are part of the same phenomenon. Certainly one result of rapid modernization and build up of procurement is that more and more of the outlays in any year's budget are a result of prior year's appropriations. They give less flexibility to any one year's budget. The same thing is happening with the operation and support costs. These more expensive systems increase the amount of necessary operating and support funds that are essentially already committed in the decision to procure the more sophisticated equipment.

Senator **Rudman**. I ask the question because there has been criticism across the board of all three services. An attempt has been made to relate operation, support and maintenance costs to other systems, such as M-1 and M-60A3. I don't think those criticisms are valid because, if we have a tank such as the M-1, the Abrams, obviously, greater capacity, greater capability, and much more complex, you can't compare it to the M-60A3 any more than you can compare the maintenance costs of a P-40 in World War I to even an F-86 of the Korean war vintage.

However, the problem is that what we are trying to do in this committee is to get the services to be more forthcoming, to come to us and say, yes, it costs a great deal more. We understand that, but we can't seem to get the numbers. My question from that is, What do you find across the board, Navy and Air Force? Do you find the same kind of problems after you have looked at them, or have you looked at them?

Ms. **Rivlin**. We have not looked at them. We focused this project on the Army and on these six particular systems. It wouldn't be surprising to find out that the same thing was going on in the other services, but we really cannot speak to that.

DEVELOPMENT OF TECHNICAL SYSTEMS

Senator **Rudman**. Of course the Army has, because of the long neglect of the Army in post Korean days, when the Army essentially did not have any real improvement in technology, even though they asked for it. The Army is playing catchup in many ways, which I think is very well stated in your testimony, when you talk about the Army's financial systems not being able to accommodate the kind of work that maybe some of the other services have done.

That is probably a result of the fact that the Navy and the Air Force have been involved in developing highly technical procurement systems over a much longer period of time than the Army. I have oftened wondered why the Army had not been able to speed-up more rapidly by adopting, say, the systems of the Air Force Systems Command, which after all have been procuring very complex systems for a very long time. I intend to ask the Army the answer to that question.

Let me go on and ask you this. Your analysis has examined about 12 percent of the total O&S budget. Do you feel from your own statistical background, Dr. Rivlin, that it is adequate base to project what you have done?

Ms. RIVLIN. We are not making any fancy claims for this study. We picked six systems not on a random statistical basis, but because they were six important systems for which data were available.

If one were going to do a statistically significant study of this, one would have taken the whole list of 180 systems and randomly picked a number of systems and examined those. If we had done that, we might not have gotten the M-1 or the Bradley Fighting Vehicle, we might have gotten some little piece of hand-held communications equipment, and a bunch of other things, and the results might have been different. We really don't know.

We are not saying that these six systems are a statistically significant representation of the whole system. All we are saying is that these are important systems. The operating costs are apparently going up very rapidly when you look at them in this way. The conclusion to us seems to be that it is worth looking at the rest, and having a systematic way of projecting the total operating and support costs that go with modernization of the Army, so that that question can be more easily answered.

CRITICISM OF ACCOUNTING SYSTEMS

Senator RUDMAN. Have you and your people talked with the Army folks about your criticism of their accounting systems in terms of what they might do in a fairly short timespan to correct a problem which they probably are as uncomfortable with as we are here in the Congress. It is certainly not one that they want. It is one that they have had a hard time in changing. Have you talked to them at all about how they are going to do that?

Ms. RIVLIN. Yes, we have communicated a lot. I was at the Pentagon yesterday afternoon at a meeting with Under Secretary Ambrose. General Davis, whom you will hear from later on this morning, was at that meeting. Certainly the question of improving the accounting systems so that they get better projections that are better associated with the actual operating costs is one that they are very aware of and are working on.

In terms of what the Army is doing, maybe the Army should tell you about that, but we certainly have communicated on the subject.

Senator **Rudman**. It certainly seems to this subcommittee, and we have discussed this at other hearings, that notwithstanding the fact that the Army has only recently, in terms of military history, come to developing these high tech systems, and thus does not have the financial support systems to oversee them. Nonetheless, with what has been established in American industry, and the other services, there ought to be a way to compress the time that is normally needed to set up that kind of sophistication, so that at least we in the Congress are given information that is more accurate than I think we have had. I think that is something I will want to talk to the Army about, and I am glad that you have discussed that with them because I think that is something that we are very concerned about.

SAR COMMITMENT

I guess I want to ask you a bit about your comment on the SAR's because, as you know, we thought we were doing something significant about 2 years ago when Senator Nunn, Senator Stennis, and I introduced and passed, and later carried in the Congress, the requirement that the SAR's be reported on a fairly timely basis with certification requirements, and so forth.

What you saying is that maybe we ought to go a bit beyond that, to have more congressional oversight on a more timely basis so that these other things can be looked at as well. This might force the Army and probably the other services to look a bit more inwardly, if you will, at these and maybe help them in arriving at understanding their problems as they occur, rather than after the fact.

Ms. **Rivlin**. I think so. The SAR's certainly do focus attention on what the procurement costs are going to be and how they are changing as designs change and as inflation changes. For all the difficulty of evaluating that information, it has certainly given the Congress a better way of looking at what you are getting into over the longer period with major modernization plans with respect to procurement.

But the operating costs are related to the design of the equipment being purchased, and you don't have a systematic way of looking at those. It is really a question of when a design change is made in a major piece of equipment, it may save on operating costs or it may make the operating costs higher, and that is relevant to the decision of whether or not to make the change.

Clearly that is often a consideration with the services when they make those decisions. But they don't organize the information so that the Congress can look at it systematically. When you are looking at what is happening to procurement cost, you are not at the same time looking at the implications for the much larger item of operating and support costs.

Senator **Rudman**. You raise an interesting point, because I do not think that conventional wisdom applied to this particular problem necessarily works, and let me give you an example, in relation to what you just said.

You would think that the more complex the system is, the higher the operating and support costs would be. That is precisely not true with certain types of new aircraft that are coming on line. They are so sophisticated, so much has gone into their design that the actual maintenance hour per flying hour is radically reduced from what it was, let's say, in an earlier generation aircraft. This well might be with some of this sophisticated, let's say, communications equipment.

It certainly isn't true with the M-1, and it is probably not going to be true with the Bradley. But I don't think we can necessarily extrapolate across the board what these are going to be with various systems, and that is what this committee is having a hard time getting a handle on it. I don't know how you get a handle on that without more current reporting from the services themselves.

Dr. Rivlin, I am going to ask Senator Weicker if he has any questions at all for you. I want to essentially set the stage statistically and factually for the Army's witnesses this morning. We are very appreciative as always of your very good work and your help to this committee.

Thank you.

Ms. RIVLIN. Thank you, Mr. Chairman, and if there is anything else that we can do for you, please let us know.

Senator RUDMAN. I appreciate that.

DEPARTMENT OF DEFENSE

DEPARTMENT OF THE ARMY

STATEMENT OF MAJ. GEN. VINCENT E. FALTER, ARMY FORCE MODERNIZATION COORDINATION OFFICE, OFFICE DEPUTY CHIEF OF STAFF FOR OPERATIONS AND PLANS

ACCOMPANIED BY:

BRIG. GEN. RICHARD D. KENYON, DIRECTOR OF WEAPONS SYSTEMS, OFFICE OF DEPUTY CHIEF OF STAFF FOR RESEARCH, DEVELOPMENT, AND ACQUISITION

ROLAND E. BERG, ASSISTANT DIRECTOR FOR MAINTENANCE MANAGEMENT, OFFICE OF DEPUTY CHIEF OF STAFF FOR LOGISTICS; AND

MAJ. GEN. HAROLD M. DAVIS, JR., DIRECTOR OF ARMY BUDGET, OFFICE OF COMPTROLLER OF THE ARMY

INTRODUCTION OF WITNESSES

Senator RUDMAN. The Army's witnesses are led by Gen. Vincent E. Falter, Chief of Army Force Modernization Coordination Office, Office of the Deputy Chief of Staff for Operations and Plans.

General Falter, if you would like to introduce your colleagues, you may proceed after that with your testimony in any way you would like. Your entire statement will be included in the record.

General FALTER. Thank you very much, Mr. Chairman.

Force modernization, just from what you have heard from Dr. Rivlin earlier this morning, very clearly cuts across a wide range of areas, and it is obvious that to solve the problem of force modernization is a team effort. At the table here today is our team to address the questions that we think you have in mind regarding procurement, O&S support, and specific hardware systems.

First of all, to my right is Brig. Gen. Dick Kenyon, who is from the Office of the Deputy Chief of Staff for Research, Development, and Acquisition. He is the director of the weapons systems. To my immediate left is Maj. Gen. Hal Davis, the Director of the Army Budget. Next to him on the end is Mr. Ron Berg, the assistant director of materiel management for the Office of the Deputy Chief of Staff for Logistics.

I have a short summary statement, if I may make it, sir.

MANAGEMENT SYSTEMS

Several years ago, the Army recognized the challenge of fielding the bow wave of new equipment and the fact that it carried with it a secondary challenge: supporting the units that the equipment was going to, with the trained men, the training devices, ammunition, fuel, repair parts, doctrinal manuals, and many other things necessary to insure that we have fightable and fully supported materiel systems.

To that end, the Army initiated a new concept, and that concept is total system fielding. We also included some management systems to insure that we send our new materiel systems into the field as a complete package and to insure that we have a single source of accurate planning and programing information.

In 1979, we published our first annual Army modernization information memorandum, or what we call the Amin. That document provides all of the information that is necessary for the Army to plan the fielding and the support of new systems. It provides fielding distribution plans for those systems as well as description of the equipment, the supply, maintenance facilities, fielding support costs, and so forth. It later becomes the bais for the cost estimates that eventually you see as estimated O&S costs.

From the data in the Amin, the major commands provide us their resource estimates, dollars, people, and so forth, through what is called the modernization resource information submission, or the MRIS. These estimates include detailed justificatin and are initially reviewed by the Army staff. A formal review board is convened at headquarters, Department of the Army, to prepare the final total O&S cost estimate for each system.

Initially, we used the Amin and MRIS processes strictly for internal program development and for justification. During fiscal year 1982, however, we expanded the management system that we use to include budgeting and execution. In doing so, we established a reporting system that we call FORMS which enables our major commands to estimate the obligation rate of their system operating and support funds.

We provide annual estimates of O&S resource requirements to Congress as well as our quarterly O&S execution reports to your staff.

We continue to emphasize improvement of our O&S resource estimation and we will continue to update our feedback process in our logistical, operational, and financial reporting systems to the point that they become a more effective mechanism for improving our management of force modernization.

While we realize that the reporting system is not yet totally mature, we are working to continue improving it on a daily basis. We honestly believe that, with some fine tuning, the systems that we have now in place are going to provide accurate projections of future operating costs.

We are currently developing some new procedures to determine earlier in the research and development cycle the implication of design changes on future operating and support costs. Those procedures will formulate O&S requirements in the intitial development of the baseline cost estimate and it will ensure that they are directly translated to all phases of the programing and budgeting system that will provide the type of information recommended by Dr. Rivlin this morning. We do not feel that adding additional O&S reporting requirements to the SAR would be constructive.

TOTAL SYSTEM FIELDING

Our planning, programing, budgeting, and execution management has a second goal, that goal is fielding combat-ready units as opposed to simply collections of new equipment. The Army trains and maneuvers by organizations. It reports its readiness by organizations. In the case of war, it is going to deploy and fight by organizations. As a result, our new efforts are focused on total system fielding as well as on total organizational fielding.

We are not only interested in adding a new tank. We are really interested in having a more effective tank battalion. So instead of focusing only on hardware, we are also focusing on force structure, training, doctrine, organization logistic support, and the dozens of other things that make a unit combat ready.

Our intent is to manage to the degree possible by organization and we have established several procedures and techniques to enable us to do that. All of those techniques require us to use a team approach, of course, because it cuts across many functional areas of the Army.

The people sitting at the table this morning are the key members of that team, and we are doing everything we can to efficiently manage the resources that you have provided—to put first rate fighting units into the field. Sir, we look forward to answering your questions.

[The prepared statement of Major General Falter follows:]

PREPARED STATEMENT OF MAJ. GEN. VINCENT E. FALTER

CHIEF, ARMY FORCE MODERNIZATION COORDINATION OFFICE

OFFICE OF THE DEPUTY CHIEF OF STAFF FOR OPERATIONS AND PLANS

Mr. Chairman, members of the subcommittee:

I appreciate the opportunity to appear before this committee today to discuss Force Modernization of the United States Army. In a very real sense, the "old Army" -- equipment, doctrine, and organization -- is changing before our eyes, and it is largely due to the resources that you have entrusted to us.

As a starting point of my report to you on our management of Force Modernization, I would like to provide a brief overview of how the Army coordinates its modernization efforts while meeting the competing demands on our resources. Each year we go through a comprehensive planning and program development process to affirm our previous management decisions or to modify our programs in order to meet the guidance and priorities that we receive from the President and the Secretary of Defense. All of these efforts are focused on increasing our warfighting capability while providing an effective deterrence in peacetime.

Obviously, the decisions made in earlier years have a significant bearing on what we do in the annual planning and program development period. Current procurement appropriations determine the deliveries of equipment in the program and budget period. Changes to our previous plans are limited by legislative guidance, basing considerations, and international commitments, as well as the constraints that are placed on our available resources.

Each year we review results of our previous decisions, consider changes to the world situation and our direction from higher authority, and then embark on a detailed analysis of our requirements and priorities for the application of resources.

Our analysis considers the force structure required to meet national security objectives, manning and training levels for the force we desire, mobilization and deployment programs, the facilities needed for our soldiers, their equipment and their families, the equipment to support our operations, and, finally, the logistic and support base needed to sustain the Army in both peace and war.

Our analytical process begins with the preparation of The Army Plan and culminates with the submission of the Program Objective Memorandum to the Office of the Secretary of Defense in May of each year. It is subjected to an intensive review each summer, refined for pricing and executability, and finally approved by the President for submission in the annual budget each January.

Certainly, we work very hard to get the best balance among the amounts of dollars we apply to manpower, equipment, facilities, and the supporting logistic base. We continually work to improve the results of this process in terms of both what we can get for the dollars we spend and how we can improve our doctrine, equipment, and force structure, to get a greater defense capability.

Returning to my primary subject -- Force Modernization, as we use the term, deals primarily with two major Army functions -- equipping and force structure. Of course, it also cuts across all of the other functions already discussed.

In the equipping arena, Force Modernization deals with improving the quality and quantity of our equipment. With your support, we have begun to improve the quality through the procurement of equipment replacements, such as the M1 Main Battle Tank, and through improvements in current equipment, such as the M60A3 Tank, an updated version of the older M60. We are improving the quantity through increased emphasis on procurement of items to fill current shortages in, for instance, wheeled vehicles, support equipment, and command, control, and communications equipment.

In force structure, the Army 90 Transition Plan provides for integrating new doctrine, organizations and equipment. Conversions of our heavy divisions, heavy brigades, and armored cavalry regiments to Division 86 force designs are programmed over the next five years. Conversions take place either prior to or simultaneously with the introduction of major new equipments. For some reserve component units, the conversions will occur at the same time as their active sister units. For instance, the 48th Infantry Brigade, Georgia National Guard, has already received M60A3 Tanks and Improved TOW Vehicles. As a Roundout

Brigade for the 24th Mechanized Infantry Division at Fort Stewart, the 48th Infantry Brigade has a higher claim on new materiel systems than many active component units. As an aside, the Army plans to procure between now and the end of fiscal year 1986, over three billion dollars worth of equipment for the Reserve Components. This equipment is not dedicated solely to roundout units.

The real challenge to the Army, and specifically to my office, has been to integrate all the Army management systems in such manner as to ensure that throughout the modernization process, units maintain their readiness to go to war. As you know, nothing is accomplished without resources. Thus, a large part of my effort has been in management of Force Modernization operating and support (O&S) resources.

MANAGING FORCE MODERNIZATION RESOURCES

Our broad priorities for resource allocation are usually described in terms of the "four pillars of defense capability," which are Force Structure, Readiness, Modernization, and Sustainability. A couple of years ago, we made a conscious decision to forego significant force structure increases and to apply ourselves to making balanced improvements in the remaining pillars in the following priority: Readiness, Modernization and Sustainability. In applying these priorities, we recognize that an inextricable linkage exists among them and that resource allocation decisions affecting one may be felt in the others. Readiness has been and remains our number one priority, with special emphasis on equipping the Total Army with adequate quantities of modern equipment capable of meeting the threat. We attach particular importance to our modernization program because it can make immediate, direct contributions to both readiness and sustainability. For example, new materiel systems clearly improve the Army's readiness for combat, and at the same time are often easier to sustain and maintain on the battlefield.

Several years ago, the Army recognized the need to adequately support planned materiel systems fielding with O&S resources. The application of those resources would ensure that systems are distributed to the Army with necessary repair parts and other supplies; trained manpower; and the requisite training and logistical support bases. Each new materiel system was, and still is, managed by a Program Manager or a System Manager. Those managers exist to ensure that each system is brought along as a complete package. Coordination was accomplished to a large degree by direct communication between the Army's Major Commands, HQDA points of contact, and the materiel systems managers. The "bow wave" of new materiel systems being introduced in the near term would have completely swamped that method of information dispersal because the Major Commands would have had to deal with too many sources of information. The Army initiated some new management systems to ensure that we bring our materiel systems into the field as a complete package and to ensure that we have a single source of accurate planning and programming information.

First, in 1980, we published the first Army Modernization Information Memorandum (AMIM). The AMIM is a highly formalized and disciplined reference document which was designed to provide, in one document, all the information necessary to successfully field and operate the new or modernized systems. It provides information regarding equipment description, operating tempo, impacts on organizations and personnel strengths, training and doctrine, supply, maintenance, facilities, and fielding support costs. The AMIM also provides fielding distribution plans for the new or modernized equipment and for selected systems to be redistributed to other units. These plans are based on projected procurement quantities and identify where, when, and how many items are to be delivered to Major Commands.

The AMIM is published annually in the August-September timeframe, with updated distribution plans sent out in February or March. The AMIM has been continually improved: the list of systems refined, and the cost factors and other information continually updated.

Then, in April of 1982, after the Army decided to proceed with transition to new force designs known as Division 86, we published the first Force Modernization Master Plan (FMMP). The FMMP provides the Army with information to allow planning and programing for transition to the new unit designs. An important part of the FMMP provides the Major Commands the opportunity to assess their capability to execute the transition plan and provide feedback to Headquarters, Department of the Army (HQDA) for revision of the plan. HQDA assesses supportability from three different perspectives. First, has everything been done to provide Total System Fielding? Second, has everything been done to ensure Total Unit Fielding? And, third, are there any functional issues that would preclude either of the above? The second FMMP was published in November 1982, with an update of the Army 90 Transition Plan in May 1983. The cycle of annual publication and semiannual update will continue.

The AMIM and the FMMP are distributed throughout the Army and used at the lowest level (tactical units, schools, etc.) to develop resource estimates for O&S costs associated with new equipment and Army 90 transition. These estimates are forwarded to HQDA through the Major Commands, to include Active, Reserve, and National Guard, in their Modernization Resource Information Submission (MRIS). The estimates include detailed justification and are initially reviewed by the Army Staff. Subsequently, a review board attended by HQDA Staff and Major Command representatives is convened to adjudicate differences and prepare the final total Army O&S estimate. This five-year estimate constitutes the O&S portion of the Program Objective Memorandum (POM) which later serves as the basis for the Army Budget. As part of the annual Command Operating Budget (COB) submission, these estimates are revised in July based on the latest distribution plans and current cost factors. The semiannual revision ensures that current budget estimates reflect Army requirements accurately. Once appropriated, these resources are distributed to Major Commands for decentralized execution.

Initially, the AMIM and MRIS process was used strictly for program development and justification. Less emphasis was placed upon further refinement of the resource requirements during formulation of the annual budget estimate. During fiscal year 1982 execution, we recognized the necessity of expanding this resource management methodology to budgeting and execution. Accordingly, a pilot reporting system called the Force Modernization Reporting System (FORMS) was established which enabled the Major Commands to estimate the obligation of system operation and support funds.

The Army continues to emphasize and improve the management of operating and support resources. Specifically, an initiative is underway to align the Baseline Cost Estimate (prepared as part of the research and development process) with program and budget estimates submitted by the Major Commands in the MRIS. To support this initiative, we are planning to refine MRIS by establishing discrete visibility for the initial fielding requirements and sustaining (O&S) base costs of materiel systems already fielded. Our efforts will continue to upgrade our feedback procedures in the logistic, operational, and financial reporting systems to the point that they become an effective mechanism for improving our management of Force Modernization.

These and other initiatives will instill more discipline in the resource requirements generation process and increase the emphasis on supportability considerations throughout the materiel system life cycle.

MANAGING FORCE MODERNIZATION

The goal of Army Force Modernization is to increase the readiness of Army units through the introduction of new force structure designs and new or improved materiel systems. The objectives of Force Modernization Management are twofold: Total System Fielding and Total Unit Fielding. Total System Fielding seeks to ensure that all required support elements are available to each organization as it accepts distribution of modern materiel systems. Total Unit Fielding is a similar concept, but it encompasses all new and current materiel systems in a unit, along with the other functional areas not necessarily associated with a particular materiel system, such as unit training, support facilities, family housing, organizational doctrine, and other resources.

Initial efforts in the realm of Force Modernization took advantage of the in-place management systems which were designed to accomplish Total System Fielding. I will discuss a few examples of those management systems.

The first is Integrated Logistic Support (ILS), which is the process through which the composite of management and analysis actions necessary to assure effective and economical support of a materiel system, both before and after fielding, are accomplished. ILS consists, briefly, of a series of actions, analyses, documents, reviews, products and controls in the Materiel System Acquisition Life Cycle. ILS starts in the concept phase and continues through production and deployment. The Army Systems Acquisition Review Council (ASARC) and its defense counterpart, the DSARC, meet at critical times in the cycle to make go/no-go/delay decisions on major new materiel systems. ILS Reviews are held to prepare for those reviews for major matteriel systems, or at lower levels for lesser systems.

Another mechanism we use to ensure Total System Fielding is the System Fielding Readiness Assessment (SFRA). This is a working level meeting, hosted by the Office, Deputy Chief of Staff for Operations and Plans, which focuses on fielding a specific system on a specific date. The SFRA attempts to take a broader look at supportability by additionally examining the projected availability of organizational support equipment and associated support items. This assessment could result in a decision to delay fielding but more likely it would result in an action plan to correct any deficiencies before the fielding date. In order to resolve general Force Modernization issues, the Army uses the Operational Readiness Monitoring System (ORMONS) committee. This solution-oriented General Officer committee meets monthly to address major modernization issues. A sample agenda is shown below. ORMONS results include decisions on fielding schedules, issue resolution and tasking, and action plans to solve forecasted problems. It has been a highly successful management tool.

ORMONS AGENDA

- STREAMLING THE DOCUMENTATION PROCESS
- CEWI BN ACTIVATIONS
- TRAINING DEVICE UPDATE
- COMMON ITEMS OF EQUIPMENT INITIATIVES
- FORCE MODERNIZATION MILESTONE REPORTING SYSTEM (FMMRS)
- REVIEW OF CORPS LEVEL RC SIGNAL STRUCTURE

Planning, programing, and budgeting for Total System Fielding is accomplished for the most part by HQDA action officers assigned responsibility within the functional Army staff agencies. The Force Integration Staff Officer (FISO) in ODCSOPS, the DA Systems Coordinator in the Office, Deputy Chief of Staff for Research, Development and Acquisition, and others in logistics, personnel, and facilities planning staffs perform this vital function.

As we gained experience in identification and resolution of materiel system issues, we found other issues related to materiel systems but which became much more visible when looked at from the perspective of the unit (e.g., Infantry Battalion, Maintenance Battalion, etc.) We have seen these types of deficiencies surfaced in meetings designed to address only materiel systems. As a result, we decided to refocus part of our management efforts on unit-level concerns.

When it comes to management of force modernization by units the most important concept is Integrated System Support (ISS). ISS is defined as the management process by which all relevant Army management systems are integrated to ensure that Force Development actions are totally supportable and executable. Note that ISS is an umbrella concept which encompasses all Force Development actions, not just hardware. By definition, Force Development actions happen to units -- and ISS focuses on units, not new materiel systems. The functional assessment elements for ISS are shown on the next page.

INTEGRATED SYSTEMS SUPPORT (ISS)

THE ISS UMBRELLA

- DESIGN INFLUENCE
- SUPPLY
- MAINTENANCE
- SUPPORT EQUIPMENT
- TEST EQUIPMENT
- MANPOWER
- PERSONNEL
- TECHNICAL DATA
- COMPUTER RESOURCE SUPPORT
- PACKAGING, HANDLING & STORAGE
- FACILITIES
- TRANSPORTATION
- STANDARDIZATION/ INTEROPERABILITY
- TRAINING
- TRAINING DEVICES
- DOCTRINE
- DISTRIBUTION
- REDISTRIBUTION
- RESOURCES (POM)
- RESOURCES (BUDGET)
- RESOURCES (EXECUTION)
- DOCUMENTATION
- FORCE STRUCTURE
- COMMAND AND CONTROL

The second important initiative to focus management on units is the designation of Unit Force Integration Staff Officers (FISOs) in ODCSOPS. These action officers, whose previous management focus has been almost exclusively on individual materiel systems, will soon be responsible for specified "type" battalions throughout the Total Army. For example, one Unit FISO will be responsible for integrating all actions involving Signal Battalions, including Active, Reserve, and National Guard units. While he will have responsibility for Signal Battalions in general, he will systematically focus his attention on specific force development actions. For instance, he would ensure that the notional XYZ Signal Battalion, to transition to Division 86 force design in the first quarter, fiscal year 1985, is fully supported with the required trained signal and maintenance personnel, proper tools, supplies, facilities, etc. so that Total Unit Fielding can be accomplished.

An additional emerging concept, currently being defined, is the Unit Fielding Assessment (UFA). The UFA will be a DA level review, conducted from the unit perspective, of the Army's capability to execute a specific force development action with minimum degredation to unit readiness. It will be the primary control machanism for the Integrated System Support (ISS) concept. I do not visualize a UFA being required for every force development action. It will be used only when numerous exceptional issues require a comprehensive review focusing on organizational concerns. Individual issues will normally be handled by the ORMONS committee or through the staffing process.

CONCLUSION

As I have explained, the Army is constantly refining and improving the methods by which we manage Force Modernization. I hope this brief synopsis will be of value to you in understanding the complexity of the situation and the reasons we are attempting to adjust our management systems to achieve a different perspective. The goal of modernization is to increase the combat capability, and thus the deterrent value, of our units. We are optimistic that this new approach will give us a much better capability to analyze our plans and programs for modernizing the Army; and by so doing, enable us to field equipment and change to new force structure designs with greater efficiency and minimum disruption to the Army's fighting force. This is not an easy task and there have been problems that we are aggressively seeking to solve. More importantly, we are seeking to prevent future problems through forward-looking management.

CBO ANALYSIS; ARMY COMMENTS

Senator **Rudman**. Thank you very much, General Falter.

I am going to yield to my colleague from Connecticut, Senator Weiker, who has another hearing to get to. Before I do so, I want to ask one threshold question. You were here and heard Dr. Rivlin's testimony. I am sure she worked with your office, in preparing her testimony, and in getting her statistics. Would you comment generally on the accuracy of her analysis, as far as you are concerned?

General **Falter**. Sir, I think I would have to say that I would have probably reached a different conclusion in a couple of areas because she was forced to use assumptions that I am not certain were assumptions that the Army would make.

On the other hand, I think it was a very useful overall effort, both from the standpoint of the Senate, as well as from the standpoint of the Army. It caused us to look at some of the things that we are doing in the fine tuning process that I mentioned. I think it has given us additional ideas.

I would say, however, that the reporting systems that we have in place are maturing and becoming more accurate over time as we have gained experience with them. For instance, I referred to the MRIS process, which results in O&S costs coming up here. That process is only 3 years old. This year, it is several orders of magnitude more accurate than last year's, and last year's was better than the first one. I guess what I am saying is that I think the fine-tuning, progressive approach to correcting and improving our O&S estimates is better than pitching it out and starting a new system from scratch.

Senator **Rudman**. Did you agree generally with her analysis of those six systems, what she thought the growth was, what it might be, and what the outside was?

General **Falter**. Not specifically with the six systems, although I would have to say that it may be accurate looking at the Army overall. I would think that the requirement for a 3- to 5-percent real growth in operational and support costs across the board for the entire Army to sustain our procurement would be more accurate than just looking at it for those systems.

As an example, I made reference to an assumption. There was one assumption that was made, because there was no data available, that the depot rebuild cost for the Reserve components would be essentially the same as they would be for the Active Army and are based upon an extrapolation of the same active component's use factors. The fact of the matter is that the Reserve components are going to be operating tanks many fewer days than the active component. They are only on active duty 39 days a year. So I would see a major flaw in that.

Senator **Rudman**. Would you, for the record, in looking at Dr. Rivlin's testimony, provide for the subcommittee any basic assumptions that were made that you disagree with?

General **Falter**. Certainly, sir.

Senator **Rudman**. We will leave the record open long enough so that you can do that.

[The information follows:]

ASSUMPTIONS USED BY CBO

In several cases, the CBO study has used assumptions that do not reflect projected operating conditions or the lastest available program information. Specifically,

CBO assumed that an additional $560 million might be required to perform depot level overhaul on equipment being displaced to the Reserve Components. This figure was based on the assumption that "all of it augmented current numbers and the overhaul cycles are similar to active forces." Neither of these conditions exists in the current Army program. First, there is not a one-for-one transfer of equipment from the active units to the Reserve Components since some of the "displaced" active equipment goes, instead, to meet our POMCUS and War Reserve and later deploying active unit needs. Second, overhaul cycles are based on established operating tempos for each system, and the Reserve Component operating tempos are significantly below those of the active force by virtue of their limited periods of active training with the equipment.

CBO stated that "eventual depot maintenance requirements . . . could well be higher than those now anticipated." This assertion was based on the increase in annual overhaul rates for the M1 tank that was presented in preliminary requirements review assessments after the submission of the President's Budget Program. While the original engineering estimate of 5 percent annual overhaul rate was used for the fiscal year 1984 President's Budget Program, CBO was advised by the Army that the preliminary requirements assessment indicated that rates could increase to as much as a 13 percent annual overhaul rate but that these estimates were considered overstated by the Army. The data supporting these increased rates are being reviewed by the Army at this time. While our requirements review has not been completed, latest data indicate that the refined maintenance requirement will be closer to the levels supported in the budget and program.

CBO stated that "if costs of replenishment spares rise in proportion to those for procurement, they would add another $600M a year by 1988." The replenishment spares program within the Army is not developed on this type of ratio; rather it is modeled on historical customer demands which consider procurement lead times and washout rates. While these model factors do relates to the number of systems in the field at a given time, the price of the end item has no bearing no our computations.

Both the Army and CBO agree that there are direct, if not formalized, relationships among fleet density and operating tempos and the support requirements in the depot maintenance and replenishment spares programs. To ensure that the relationship is accurately established and then used to validate our program and budget estimates in April 1983, the Assistant Secretary of the Army tasked the Comptroller to develop a "methodology which will ensure that the related operating and support components in Army Programs are resourced in a balanced and understandable manner."

General FALTER. Again, I would like to comment that I think it was a very well done effort. Ms. Slatkin from the staff was extremely cooperative. I might add that she is extremely knowledgeable of the Army systems, and it was a very useful exercise from our standpoint as well.

Senator RUDMAN. Senator Weicker.

SECOND SOURCE FOR M-1 ENGINE

Senator WEICKER. Thank you very much, Senator Rudman.

General Falter, in your testimony you make reference to the M-1 main battle tank, and that is the piece of hardware that I have a few questions on.

It is my understanding, No. 1, that the Army is giving serious consideration to proposals for establishing a second producer for the AGT-1500 turbine engine that powers the M-1. A request for proposal was released by the Army in February 1983, with final decision on contract award expected this August. It is also my understanding that the House Armed Services Committee has inserted a provision in the defense authorization bill that would prevent the establishment of a second source for the AGT-1500 turbine engine. So let me get to the series of questions on that subject.

In the past, AVCO has experienced considerable difficulty in meeting its contract delivery schedule, however in recent months AVCO has been meeting or exceeding that schedule, and is gradually eliminating the shortage of engines at the two tank assembly plants. I understand that they expect to be well ahead of schedule by the end of November. Would you agree that AVCO is now capable of meeting its contract delivery schedule?

General **Falter**. Let me defer, sir, if I may, to the expert on our team here, General Kenyon.

General **Kenyon**. Senator Weicker, everything you have said is correct. The Army is currently pursuing actions to examine the second source for that engine. The origin of those actions, of course, was in the 1983 congressional language, part of which was in the HAC report last year.

We do have conflicting guidance. We are continuing and we would not proceed to implement any plan of action until we have cleared it with all four committees of the Congress. At the current time, the schedule is that we would come over in August to discuss that.

Your second point, related to AVCO, yes, sir, they had experienced difficulties. Some of those have been corrected. They are currently behind approximately 20 engines in their deliveries to our required schedules. However, that number is getting smaller month by month, and we see that they should be on the delivery schedule in the fall timeframe.

We believe that they could meet current delivery schedules. The interconnection between your two points is that in a mobilization situation we would have a significantly greater requirement for engines than is currently being produced, and that is what we are addressing.

Senator **Weicker**. Thank you very much for your answer. it is totally responsive to the initial question.

MOBILIZATION REQUIREMENT FOR M1 PRODUCTION

Let's talk about that mobilization for a minute. The primary justification for establishiing a second producer for the AGT-1500 turbine engine is the need for surge capacity of 568 M-1 tanks per month in the event of mobilization and war; is that correct?

General **Kenyon**. Sir, I cannot validate that exact number. I believe that in one Army document that number was quoted. I believe that number was erroneous. I use in discussion with my folks that in mobilization, we would plan to produce approximately 500 tanks a month.

Senator **Weicker**. When will the Army have sufficient war reserve stocks, including AGT-1500 turbine engines available to support the M-1 tank force for several months of combat?

General **Kenyon**. Sir, that time is well in the future, as you all know, in that the first war-reserve funding for the M-1 tank occurred in fiscal year 1983, and it was a small amount of money. So none of those materials have been delivered. They would be delivered in the 1984 timeframe.

Our current requirement in defense guidance is to have [deleted]. There is a larger number in the future, but we peg at [deleted]. I believe that today our program as structured will not give us that full [deleted] in all cases in that timeframe.

Senator **Weicker**. Is the production leadtime for the AGT-1500 turbine engine about 24 months.

General **Kenyon**. Yes, sir; I use the number 23.

Senator **Weicker**. If the leadtime on the AGT-1500 turbine engine is about 24 months, and if M-1 war reserve stocks would be adequate for several months of combat at best under current Defense Department planning guidance, it would seem to me that the war would be over long before the additional engines could be delivered to the field, is that not correct?

General **Kenyon**. Sir, that would, of course, depend upon the length of a conflict. However, in war reserve stocks, we look at supporting the assets that are fielded, primarily prepositioning and those forward deployed, and a Conus supply also. If we then had to surge tank production, a second source would give the capability to bring in a larger quantity of engines to support a larger quantity of tanks, but the timeframe would not be shorter.

Senator **Weicker**. What is the present monthly production capacity of the other M-1 subcontractors and vendors?

General **Kenyon**. We are currently, sir, to about a level of 60 tanks per month across the board. There are some minor holes in that, but by and large it is 60 across the board.

SURGE CAPACITY COSTS

Senator **Weicker**. When would the other M-1 subcontractors and vendors achieve a surge capacity comparable to the one planned for the engine, and how much would that cost?

General **Kenyon**. We are currently planning, through facilitization, to bring the prime and subcontractors to a standard sustained 90 vehicles per month in fiscal year 1985. With that facilitization, then, for normal operation, we feel that they could all surge by using three shifts, 8 hours a day, 5 days a week, or a surge capacity to 150.

I would like to defer to Colonel Rittenhouse, please, for the cost of that. I believe it is $54 million.

Colonel **Rittenhouse**. Yes, sir, the engine portion of that will be $54 million.

Senator **Weicker**. If a second producer were established for the AGT-1500 turbine engines, would the second producer develop a whole new set of vendors, or would the second producer share the same vendors with AVCO?

General **Kenyon**. Senator Weicker, I can't give you an accurate answer to that as the companies who responded to the Army's request for proposal, those are being evaluated now, and the contents I am not privy to until a selection is made. That information would be known and presented when it is available in the August timeframe, if you desire.

Senator **Weicker**. Cost estimates for establishing a second producer for the engine range from $110 million to $265 million.

Would you like to venture your opinion on that matter as to how much it would cost?

General **Kenyon**. Sir, to my knowledge, those bandied numbers encompass the planning figures that we have used. We nominally use a bit over $100 million to establish that second source.

Senator **Weicker**. Let me say this. I thank you very much for your responses. They are right on the mark. I also look forward, as does the House Armed Services Committee, to discussing any plans along this line with you, or anything else that is done. You certainly have been responsive to my questions, General, and I am very impressed with your grasp of them. Thank you very much.

General **Kenyon**. Thank you, sir.

Senator **Rudman**. Thank you, Senator Weicker.

I guess we will proceed, and I want to go to the DIVAD. I have some questions on M-1, but we will come back to those.

DIVAD ACQUISITION

Staff papers that we have gotten from the Army indicate that the costs of lots 1 and 2 of the DIVAD vehicle will go to the contract ceiling. Is there any reason why lot 3, that is the 1984 buy of 130 for $542 million, will not go to the ceiling on the original fixed-price contract, and what assurances can you give us that the cost of the programs is not going to go even beyond that, once a new contract is negotiated?

General **Kenyon**. Senator Rudman, I guess I am the member of the team that gets that one, too.

Senator **Rudman**. I think you are going to get probably most of these, General Kenyon.

General **Kenyon**. On the DIVAD system, I know that you and your staff are all familiar with a somewhat unique acquisition strategy that was undertaken in the program, called by some a skunk work program, light U-2 programs, and so forth, where we competed essentially hand offs two contractors in the development phase, made a selection of a contractor and locked him in for production at the time that development had not been totally completed.

There is a reprograming action on the Hill to you all related to the completion of development, RDT&E, and we are in the process of working a reprograming action for the first 2 years of procurement on that program which we feel will go to ceiling.

I can't give you good, close, precise, auditable data at this time, which will show you where those contracts actually will come in, be it at ceiling or below. Basically the reason is that we do not have the first vehicle off the line at this time. It is due to come off this fall, and we will start to establish a cost base as we work through the first production.

We took the action based upon history, the parametrics that we look at, and that I had the fortune or misfortune of being a project manager and taking a system from development to production to fielding——

Senator **Rudman**. Which project was that, General Kenyon?

BLACK HAWK

General **KENYON**. Sir, that is the Black Hawk.

You know that initially the first production contract on Black Hawk went to ceiling. We are in a multiyear strategy now, with fixed price pricing, and then it came down. Though we have had limited experience in procurement of these major systems in modernization, and though there is a spectrum of 180, we have procurement experience on maybe 10 to 20 at this time.

We believe that the initial production is a very difficult transition, and there is a likelihood that the contract will come to ceiling. We feel that in about the third to fourth year, we should have cost data which tells us where we will stand and should come in below ceiling.

Senator **RUDMAN**. Have you given any thought to trying to negotiate a new contract in the near term to see what the real cost of the program might be. That way you might either decide to terminate it or come back to us and say, "It is going to cost this, but we still think that it is worth it." Is that something you might consider doing?

General **KENYON**. We have discussed and considered that, Senator Rudman, but the production options that we are exercising in the 1984 we have on the Hill with you helped the Government's and the taxpayers' liability for those systems in a fixed price incentive type of contract.

Those prices were obtained in competition with other contractors, and we feel that if we attempted to renegotiate it at this point in a sole-source environment, there is almost a 100-percent probability that the renegotiated cost would be significantly higher.

We feel that the best investment for the Government at this time is to continue with those prenegotiated options which have caps to them.

CHIEF OF STAFF'S COMMENTS

Senator **RUDMAN**. I only have one other question, which is probably more technical. In light of the Chief of Staff's recent statement. I think his statement may attempt to have a chilling effect on some of the questions that people ask around here.

According to the New York Times article yesterday, he was very scathing in his indictment of Congress. "With a chuckle, he said that it was his personal view, but he didn't mind telling the Congress how to do business, since they had been telling him how to do business for many years." I think that that is a perfectly fair comment.

He went on to say that every one of these committees is looking at individual weapon systems to cut, to stretch out, to do something, "There is no continuity in the programs. There is no stability. There is no incentive to industry. Nobody in Congress looks at what the purposes of the forces are." He added that the committee should look at how much we could afford, I am paraphrasing here, and then he said, "We should get into just numbers." We shouldn't be getting into details.

To some extent I can understand General Meyer's views. But I think there are occasions, when we do have to get into details, because the record ought to be clear on some of these systems since neither the Army nor the Congress is the universal home of wisdom. With that in mind, I just want to ask you a couple of technical questions on DIVAD.

DIVAD CAPABILITIES

Has the Army taken another look at DAVID, General Kenyon, in terms of its range because of the evolution of much longer standoff ranges for modern aircraft that it may have to deal with. It is a question, in my view, of probably an excellent system, but what it may have been designed to deal with may have changed radically, and that is a question I would just like you to respond to.

You may not be the Army's most competent witness on that, but you are here, and I would like to hear your answer.

General **Kenyon**. Thank you, sir.

Senator **Rudman**. There may be others, you know, who are specialists in that.

General **Kenyon**. Sir, I know there have been several questions on that that have evolved over time. Of course, I can't in an open hearing go into all of the details related to relative range capabilities of threat and friendly systems.

We have examined that and my personal assessment is that the DIVAD is not a panacea. Of course, we structure our air defense systems as a combination of both guns and missiles, and we field them in a complex way in the organizations on the battlefield so that they are complementary, such that in my mind if we go to war against some of those threats that you are aware of, it will not be a DIVAD standing alone in a particular area. There will be missiles which have different signatures, different acquisition capabilities, different ranges, and so forth. Your ultimate answer, I guess, is in the mix of that air defense family. That is one standpoint, I believe.

The second is that though perhaps the threat has changed some, and we recognize a desire for gun/missile mixes, the DIVAD system gives us so much more capability by quantums than the current systems that we have in there today, nominally a 2 to 2½ increase in range capability, that we think that it is important to have that system for that increased range capability in the complimentary aspects with the missile systems.

Senator **Rudman**. I had a meeting with General Adsit about 2 months ago, and we discussed the susceptibility of the radar systems to a number of things that we can't discuss in an open hearing. Is the Army continuing to look into those weaknesses in the radar system?

General **Kenyon**. Definitely, sir. In fact, we have one of our two prototypes from our developmental program currently at Fort Bliss in an operationally oriented test, and that is one of the major factors in that test, to examine the radar in that environment and determine whether or not some software fixes in the system to correct previously identified deficiencies have totally corrected them, or what shortfalls we have now.

AMMUNITION PROCUREMENT

Senator **Rudman**. One last question on DIVAD, and that is the 40 millimeter ammunition problem. Has the problem been fixed, the procurement schedules, and so forth?

General **Kenyon**. Sir, I don't have personal information of that. If I may, I would call on Col. John Hudak who handles the ammunition side.

Senator **Rudman**. I will tell you what we will do that, then, because we have a lot to cover, why don't you supply that for the record. The question is simply whether or not the slippages that we had been advised of have been fixed. If they haven't when are they going to be?

General **Kenyon**. Yes, sir.

[The information follows:]

DIVAD Ammunition

There are currently no procurement scheduling problems that will prevent timely delivery of the 40mm DIVAD ammunition. The overall DIVAD system and associated ammunition are totally synchronized so as to assure timely troop training and system fielding. The fiscal year 1984 ammunition appropriation will assure that these critical milestones are met on a timely basis. Procurement quantities have been adjusted to the fiscal guidance and are considered executable; however, they do not fully support estimated fielding requirements for the proximity fuzed ammunition in fiscal year 1984 and succeeding years.

COPPERHEAD

Senator **Rudman**. Of course, continuing to contradict General Myers' thesis that we should only ask about numbers and not details, we are going to ask about a few more details today. I want to talk about Copperhead because there is something about that that doesn't really quite make sense to me, and maybe you can make sense of it for me.

You now want to restart the program, and you want to use $75 million in 1984 plus $15 million from 1983 funding. I don't quite understand why the Army was in favor of terminating that $1.3 billion program for affordability last year, but now evidently it wants to restart it at, I understand, two-third the original size at a cost of about $1.6 billion.

Could you explain that to us, and I would like it for the record.

General **Kenyon**. If I may, Senator Rudman, I may sound like I am making an excuse. We divide the management of the Army's hardware into two pieces. That piece falls on the other side.

Senator **Rudman**. All right.

General **Kenyon**. Colonel Hudak is on that side, and I could have him address that briefly.

Senator **Rudman**. Maybe he would like to come to the table, and that would be fine. The more targets, you know, the less one is apt to get hit. [Laughter.]

General **Falter**. In the Army we have a saying, if you all bunch up, one hand-grenade will get you all.

Senator **Rudman**. That is true.

Colonel **Hudak**. Sir, my name is Col. Robert Hudak.

I will address your question by stating that it is true that we have requested an additional $75 million in 1984 as a result of a review of the reliability experience that Copperhead has had since July of 1982.

Right now, Copperhead is firing at approximately 82.4 reliability and that was a major factor in reviewing the program to see whether or not the Army could use the program with an increased reliability.

INCREASE IN RELIABILITY

Senator **RUDMAN**. Colonel, what caused that rather remarkable change in reliability? Was there some development work done in the interim, or were there some basic changes done by the designers?

Colonel **HUDAK**. As a result of some failures, the contractor did review his program with pressure from the Army to see what could be done to increase the reliability. There was an on-line review, and analysis of failures, and a review by the Department of Army going down to the contractor to see what it could do to assist in this reliability issue.

So there has been a contractor and Army effort to increase reliability. In fact, there is a team down there right now that will finish on July 11, and its purpose is not only to review what is being done to increase reliability, but also to reduce cost.

Senator **RUDMAN**. Have you negotiated with the prime contractor to reduce cost in this program at this level of funding?

Colonel **HUDAK**. We now have a fixed firm price contract with the contractor.

COPPERHEAD ECONOMIC PRODUCTION RATE

Senator **RUDMAN**. What is the economic production rate for the Copperhead?

Colonel **HUDAK**. The Copperhead facility was constructed based on a requirement that was identified some time ago, to produce approximately 700 rounds per month. That is basically the economic production rate.

Senator **RUDMAN**. The production on this procurement is going to be at the rate of 300 per month, is that correct, but no more than that?

Colonel **HUDAK**. Yes, sir, eventually it will get to 300 per month, but right not it is about 250 rounds.

Senator **RUDMAN**. You might supply for the record information as to what the costs are and would be, because if the economic production rate for the facility was 700, you are going to be producing up to a rate of less than half of that, I believe, is that correct? I think rather than getting into a lot of details on that, we would like that for the record, if you could do that.

[The information follows:]

COPPERHEAD

Our last estimate, in June 1982, for our previous Copperhead program of 44, 986 rounds was based on producing at the economic rate (700 rounds a month) through fiscal year 1987. The Program Acquisition Unit Cost was $36,000 (escalated dollars). This would have been the cost had the program not gone through aberrations. The present restructured program is based on a buy of 30,462 through fiscal year 1991, has a Program Acquisition Unit Cost of $54,400 (escalated dollars), and a planned production rate not to exceed 300 rounds per month. A joint Army/contractor team is currently evaluating methods to reduce cost, and another study is underway to develop a feasible approach to introduce competition into the program by establishing a second production source. A quick relook of artillery ammunition rates indicates it may be cost effective to fire more Copperheads and fewer other conventional projectiles. We are in the process of verifying these findings now. A combination of all these activities will introduce several alternatives to improve the Copperhead acquisition plan and as they become available we will evaluate their efficacy and affordability.

AH-64

I would like to turn to the AH-64. Who would be the person who would talk about the AH-64.

General FALTER. General Kenyon, sir.

Senator RUDMAN. General Kenyon, a year ago the program was for 96 AH-64. Now you are requesting $1.3 billion for 112 of them. Since the first one has yet to be produced, if I am correct about that, how are you certain that this program is executable at this point, and how confident are you that you can control costs on the program once it gets underway?

General KENYON. Senator Rudman, as you are aware, the procurement requested of you in 1984 is the third year production in the AH-64. The first year was 11 aircraft, the second, 48, and in previous submits, we had 96 for 1984. That was when at the same time we had retained approximately $582 million within the program as management reserve.

After successfully negotiating the second year contract with Hughes in 1983, at the quantities and number of dollars authorized and appropriated by you all, we applied the management reserve to buy additional aircraft and we took it from 96 to 112 in that particular year of 1984, and additional aircraft in the outyears of the program, taking the total quantity up to 515.

The action was taken from a cost standpoint primarily upon the fact that we had negotiated in a fixed price incentive environment the first 2 years of the program within the dollars and at the quantities that we had said that we could do with you.

As far as our confidence in the ability to get that production ramp, to achieve it, I can only say that we have examined the facilities that are in place at the new production plant at Mesa, yes, the first aircraft is now going down the line it is due to be delivered about the end of this calendar year, formally accepted the second month of next year.

We are having work-around problems as you have when you establish a production line, but we feel, from internal audits and I believe even the latest GAO report has stated that they feel that the way we have undertaken it, we could logically achieve that production rate of 112. I can't give you a great deal of production experience that we have not yet achieved.

Senator RUDMAN: As a result of your, I guess you would call them successful negotiations, what kind of savings from where we thought we were a year or so with the AH-64, are we at now in 1984 and 1985?

If you don't have that at hand, you can supply it for the record. I know I am asking about a lot of diverse programs.

General KENYON. Senator Rudman, memory tells me that last year, early in the 1983 testimony, I wasn't in the office at that time, but the unit program acquisition cost of that aircraft was about $16.2 million. Today's figure, with the negotiated contracts, with a buy of 515 vehicles, the program unit acquisition cost is approximately $14.1 million, a $2 million decrease. But I would like to, please, have the opportunity to provide you the data and backup information for the record on that.

Senator RUDMAN. Very well, General.

[The information follows:]

APACHE COST COMPARISONS

The following is a comparison between APACHE unit costs briefed to Congress last year for 446 aircraft, and the current estimate for 515 aircraft.

[Dollars—ESC]

	446	515	Dollars	Percent
Flyaway unit cost	10.66	8.92	−1.74	−16
Procurement unit cost	13.79	11.91	−1.88	−14
Program acquisition unit cost	16.22	14.06	−2.16	−13

COMPETITION IN AH-64 CONCEPT FORMULATION

Senator RUDMAN. One more question on the AH-64. It is my understanding that Hughes Aircraft has offered, as a demonstration model, the AH-64 to test a blend of designs of airframes, systems, engine technologies. Given the fact that they have, I guess, it is around a $2 million contract from the Army in the no tail rotor helicopter area.

Would use of the AH-64 as test-bed, if you will, for some of this technology, kind of give them kind of a tilt in the ultimate decision in terms of development of LHX?

General KENYON. Sir, for a moment, I couldn't connect that, but it is connected with the light helicopter family of aircraft which you and your staff have had briefings on.

I believe that Hughes' work with the NOTAR, or the no tail rotor, yes, that does give them an edge in that particular area toward the LHX. However, all four helicopter manufacturers are competing currently in the concept for the formulation of LHX, and they all have a tilt in my mind one way or another. If LHX should ever become a tilt rotor or a tilt wing type of system, I believe, then, that Bell Helicopter would have the legs up from that standpoint.

It may be an all-composite structure airframe rather than the metallic that we use today, and in that case I believe that folks like Sikorsky and Bell Helicopter would have an edge in that area in that they are currently executing an all-composite aircraft program, a demonstrator type of thing, too.

I guess what I am saying, bottomline, is that all four members of that industry are competing in concept formulation and in technological programs that would contribute to the final product which gives them all a slant one way or anther as we would get to the final aircraft.

Senator **Rudman**. Essentially, you are satisfied that there is going to be enough competition here because, obviously, this is a very major program, and it would be not in anyone's interest, certainly not the Army's, to have this in any way tilted toward any of these suppliers at this time.

General **Kenyon**. That is right.

Senator **Rudman**. You think that that is going to be adequate competition?

General **Kenyon**. We feel, perhaps, as we are forecasting quantity requirements in the neighborhood of 5,000 airframes in that program as it replaces what becomes the older portion of our total aircraft fleet today, I guess I just believe that any one producer could not handle that at a rate that we would desire.

Senator **Rudman**. My understanding is that there are several foreign helicopter manufacturers that are interested in that program. How are you going to handle that, General Kenyon, or are you not prepared to say this morning?

Geneal **Kenyon**. Sir, we are aware that that program is generating interest offshore. However, we have not gotten to the point at which we have given consideration to acquisition strategies at this point.

BLACK HAWK

Senator **Rudman**. Turning to a subject on which you are an expert, the Black Hawk. Last year the Congress directed the Army to begin qualifying the Black Hawk helicopter as a Hellfire missile platform. How much is it going to cost to stockpile additional missiles, test program and provide adequate crew training, if you know?

General **Kenyon**. Senator Rudman, we were requested in committee report language last year to indicate the qualification of Hellfire on Black Hawk. We have not initiated that program. We have looked initially into the developmental costs of it, which are significant, and in previous testimony this year I have provided numbers in the neighborhood of $70 million nonautonomous, and up to $300 million for an autonomous capability aircraft. However, that is not the full cost, and that is just the first layer.

I can't identify to you the peripheral cost of things like who on the battlefield would designate, would that require augmentation of designators that already exist, the training and the manning implications. We are currently developing that data in a manner that we will understand it and present it to you.

The Training and Doctrine Command, and the Development and Readiness Command are working on that, and I believe that we owe an answer. Per one of last year's committee reports it was requested that we provide that answer in May, however, the tasking was delayed to us, and I signed off on documents coming over last week that said we would provide all of that information, I believe, in the August timeframe.

Senator **Rudman**. Fine.

General **Kenyon**. We will provide that.

UH-60A PROCUREMENT

Senator **Rudman**. One other question on the UH-60A. We have a request for $30.2 million to start the second multiyear contract. I don't believe we have any justification submitted for that second multiyear contract. Is that something that we are going to be getting?

General **Kenyon**. My memory tells me that we submitted that data, the exhibits that are necessary for the multiyear. However, I will explore it, and if I am mistaken, I will provide an answer for the record.

Senator **Rudman**. If you would do that.

General **Kenyon**. Yes, sir.

[The information follows:]

The second multiyear contract justification for the BLACK HAWK helicopter is at attachments 1 through 17. The multiyear exhibits reflect the estimated funding required for annual and multiyear procurement of airframes in Fiscal Years 1985-1987 and includes funding requirements for Fiscal Year 1986 for a follow-on Fiscal Year 1986-1988 engine multiyear procurement. The Fiscal Year 1985-1987 airframe multiyear is fully funded as depicted in the Fiscal Year 1984 President's Budget submission. Subsequently, budget submissions would require adjustments to accommodate a follow-on Fiscal Year 1986-1988 engine multiyear procurement.

(Attachment 1)

AIRFRAME MULTIYEAR (FY 85-87) PROCUREMENT FUNDING PLAN COMPARISON

($ in Millions)

Programs UH-60A BLACK HAWK and EH-60 QUICK FIX

	FY 84	FY 85	FY 86	FY 87	TOTAL
UH-60A BLACK HAWK					
Airframe Quantity		78	78	78	234
Annual Program ($)	32.2	324.0	348.1	334.9	1,039.2
Multiyear Program ($)	87.6	314.7	309.1	245.9	957.3
Proposed Savings ($)	-55.4	+9.3	+39.0	+89.0	+81.9
EH-60 QUICK FIX					
Airframe Quantity		18	18	18	54
Annual Program ($)	7.4	74.8	80.3	77.3	239.8
Multiyear Program ($)	20.2	72.7	71.3	56.7	220.9
Proposed Savings ($)	-12.8	+2.1	+9.0	+20.6	+18.9
UH-60A BLACK HAWK and EH-60 QUICK FIX					
Airframe Quantity		96	96	96	288
Annual Program ($)	39.6	398.8	428.4	412.2	1,279.0
Multiyear Program ($)	107.8	387.4	380.4	302.6	1,178.2
Proposed Savings ($)	-68.2	+11.4	+48.0	+109.6	+100.8

(Attachment 2)

MULTIYEAR PROCUREMENT CRITERIA

Program UH-60A BLACK HAWK

This package represents a proposal to procure 288 (234 UH-60A BLACK HAWK and 54 EH-60A QUICK FIX) aircraft on one three year airframe multiyear contract over the period FY 85-87. This proposal reflects the termination liability funding of expanded advance procurement funding concept.

CRITERIA

The US Army proposes the UH-60A BLACK HAWK helicopter system (airframe) as a candidate for multiyear contracting in FY 85-87 and since it satisfies each of the elements of the criteria stated in Deputy Secretary of Defense of 1 May 1981: benefit to the Government, stability of requirements, stability of funding, stable configuration, degree of cost confidence, and degree of confidence in contractor capability. Each is briefly discussed below:

1. Benefit to the Government. Based on a comparison of three single year cost estimates to a multiyear cost estimate for the UH-60A BLACK HAWK airframe over the period FY 85-87, there is a potential for cost avoidance in the neighborhood of $81 million for multiyear contracting over single year contracting. For UH-60A BLACK HAWK and EH-60A QUICK FIX aircraft procurement, there is a potential for cost avoidance in the neighborhood of $101 million.

2. Stability of Requirement. The procurement objective for the UH-60A BLACK HAWK aircraft since inception of the program in 1971 has been 1,107. The Authorized Acquisition Objective (AAO) has been recently revised upward to 1,857.

3. Stability of Funds. The funding for the UH-60A BLACK HAWK program is stable. The program returned $11.3 million from its FY 81 Supplemental Budget and reduced the FY 82 Weapon System Budget Amendment Submission by $17.4 million. Moreover, since December 1981 the acquisition cost of the UH-60A BLACK HAWK program has continued a downward trend.

4. Stable Configuration. The Program Objective Memorandum (POM) FY 85-89 provides adequate funding to accommodate an FY 85-87 airframe multiyear contract. Research and Development (R&D) on the UH-60A BLACK HAWK airframe and T700 engine are complete. Five single year airframe contracts (FY 77-82) and one multiyear airframe contract (FY 82-84) and six single year engine contracts (FY 77-82) have been awarded. As of 31 May 1983, production deliveries for the UH-60A BLACK HAWK aircraft total 406 to the US Army, including ten US Air Force aircraft. Similarly, production deliveries for the T700 series engine total 1,006 (989 T-700-GE-700 engines, 12 T700-GE-401 engines and five T700-GE-701 engines).

5. Degree of Cost Confidence. The current procurement cost estimate for the UH-60A BLACK HAWK program is realistic. Proven cost estimating techniques were used in developing the current procurement cost estimate. Historical Cost/Schedule Control System Criteria (C/SCSC), the FY 82-84 multiyear negotiated contract and data collected during visits to the contractor's sites were used to develop this cost estimate. There is 100% confidence that the inclosed cost profile is adequate to execute an FY 85-87 contract for 288 aircraft (234 UH-60A BLACK HAWK airframes and 54 QUICK FIX airframes). Firm fixed price contract are being awarded to the airframe manufacturer and engine manufacturer for all future contracts.

6. Degree of Confidence in Contractor Capability. There is no question that the UH-60A BLACK HAWK airframe and T700 series (BLACK HAWK, QUICK FIX SEAHAWK and NIGHT HAWK programs) engine producers can effectively produce the hardware required, within their current capability over the period FY 85-87. The airframe producer is currently delivering helicopters at a rate of 10 per month. Every facet of the UH-60A BLACK HAWK airframe and T700 series engine producers manufacturing operations are showing signs of production and cost management improvement.

(Attachment 3)

ACQUISITION STRATEGY COMPARATIVE SUMMARY
($ in Millions)

Program UH-60A BLACK HAWK

	ANNUAL CONTRACTS	MYP ALTERNATE
NUMBER OF UNITS (AIRFRAMES)	234	234
TOTAL CONTRACT PRICE	1,039.2	957.3
CANCELLATION CEILING	N/A	N/A
$ COST AVOIDANCE OVER ANNUAL		81.9
% COST AVOIDANCE OVER ANNUAL		7.9
RISK RELATED FACTORS		
- REQUIREMENT STABILITY	LOW	LOW
- FUNDING STABILITY	LOW	LOW
- CONFIGURATION STABILITY	LOW	LOW
- COST CONFIDENCE	LOW	LOW
- CONFIDENCE IN CONTRACTING CAPABILITY	LOW	LOW

NOTE: This proposal reflects three year FY 85-87 airframe multiyear contract with termination liability funding of expanded advance procurement.

(Attachment 4)

TOTAL PROGRAM FUNDING PLAN
($ in Millions)

Program UH-60A BLACK HAWK

	FY 84	FY 85	FY 86	FY 87	TOTAL
Quantity (Airframe)		78	78	78	234
Annual Program					
End Item		521.9	549.6	580.6	1,652.1
Less Advance Funding		93.0 1/	98.1 2/	92.0	283.1
Net Request		428.9	451.5	488.6	1,369.0
Advance Funding	81.9	96.9	92.8	0	271.6
(For FY 85)	76.9	0	0	0	76.9
(For FY 86)	5.0	90.1	0	0	95.1
(For FY 87)		6.8	85.1	0	91.9
(For FY 88)			7.7		7.7
Total Budget Request 4/	81.9	525.8	544.3	488.6 5/	1,640.6 3/
Multiyear Program					
End Item	0	505.1	524.1	541.0	1,570.2
Less Advance Funding	0	121.1 1/	131.2 2/	141.4	393.7
Net Request	0	384.0	392.9	399.6	1,176.5
Advance Funding	137.3	132.5	112.4	0	382.2
(For FY 85)	105.0	0	0	0	105.0
(For FY 86)	24.5	103.6	0	0	128.1
(For FY 87)	7.8	28.9	104.7	0	141.4
(For FY 88)			7.7		7.7
Total Budget Request 4/	137.3	516.5	505.3	399.6 5/	1,558.7 3/
TOA Difference	-55.4	9.3	39.0	89.0	81.9

Outlays	FY 84	FY 85	FY 86	FY 87	FY 88	FY 89	FY 90	FY 91	TOTAL
Annual	11.2	102.4	295.0	472.4	428.3	254.1	58.7	18.5	1,640.6
Multiyear	18.7	120.3	306.8	446.5	382.9	218.0	50.4	15.1	1,558.7
Difference	-7.5	-17.9	-11.8	+25.9	+45.4	+36.1	+8.3	+3.4	+81.9

NOTES:

1. Includes $16.1M prior year advance funding from FY 83
2. Includes $3.1M prior year advance funding from FY 83
3. The cost profile reflects a FY 85-87 airframe multiyear contract funded program.
4. This represents a preliminary cost estimate accomplished without the benefit of single year or multiyear contract cost proposals.
5. Excludes advance procurement in FY 87 for follow-on procurement.

(Attachment 5)

CONTRACT FUNDING PLAN
($ in Millions)

Program UH-60A BLACK HAWK

	FY 84	FY 85	FY 86	FY 87	TOTAL
Quantity (Aircraft)		78	78	78	234
Annual Program					
End Item		321.7	345.4	372.1	1,039.2
Less Advance Funding		32.2	34.5	37.2	103.9
Net Request		289.5	310.9	334.9	935.3
Advance Funding	32.2	34.5	37.2	0	103.9
(For FY 85)	32.2				32.2
(For FY 86)		34.5			34.5
(For FY 87)			37.2		37.2
TOTAL BUDGET REQUEST	32.2	324.0	348.1	334.9	1,039.2
Multiyear Program					
End Item		304.9	319.9	332.5	957.3
Less Advance Funding		60.3	67.6	86.6	214.5
Net Request		244.6	252.3	245.9	742.8
Advance Funding	87.6	70.1	56.8	0	214.5
(For FY 85)	60.3				60.3
(For FY 86)	19.5	48.1			67.6
(For FY 87)	7.8	22.0	56.8		86.6
TOTAL BUDGET REQUEST	87.6	314.7	309.1	245.9	957.3
TOA Difference	-55.4	+9.3	+39.0	+89.0	+81.9

Outlays	FY 84	FY 85	FY 86	FY 87	FY 88	FY 89	FY 90	FY 91	TOTAL
Annual	4.4	57.0	176.7	298.9	280.2	170.1	39.3	12.6	1,039.2
Multiyear	11.9	74.6	188.6	273.1	234.7	134.1	31.0	9.3	957.3
Difference	-7.5	-17.6	-11.9	+25.8	+45.5	+36.0	+8.3	+3.3	+81.9

NOTE: This represents a preliminary cost estimate accomplished without the benefit of single year or multiyear contract cost proposals.

(Attachment 6)

IMPACT OF INFLATION ON FUNDING
($ in Millions)

Program **UH-60A BLACK HAWK**

	TOA ($ in Millions)				
MULTIYEAR PLAN	**FY 84**	**FY 85**	**FY 86**	**FY 87**	**TOTAL**
Contract					
+2%	91.1	334.0	334.6	271.5	1,031.2
+1%	89.4	324.2	321.7	258.4	993.7
Budget	87.6	314.7	309.1	245.9	957.3
-1%	85.9	305.4	296.9	233.8	922.0
-2%	84.1	296.2	285.1	222.3	887.7
Total Program					
+2%	142.8	548.1	547.0	441.2	1,679.1
+1%	140.0	532.2	525.8	420.0	1,618.0
Budget	137.3	516.5	505.3	399.6	1,558.7
-1%	134.6	501.2	485.4	380.0	1,501.2
-2%	131.9	486.1	466.1	361.2	1,445.3
ANNUAL PLAN					
Contract					
+2%	33.5	343.8	376.8	369.8	1,123.9
+1%	32.8	333.8	362.2	352.0	1,080.8
Budget	32.2	324.0	348.1	334.9	1,039.2
-1%	31.6	314.4	334.4	318.5	998.9
-2%	30.9	304.9	321.1	302.7	959.6
Total Program					
+2%	85.2	558.0	589.2	539.5	1,771.9
+1%	83.5	541.7	566.4	513.5	1,705.1
Budget	81.9	525.8	544.3	488.6	1,640.6
-1%	80.3	510.2	522.9	464.7	1,578.1
-2%	78.7	494.9	502.0	441.7	1,517.3

(Attachment 7)

SAVINGS AND COST AVOIDANCE
($ in Millions)

Program UH-60A BLACK HAWK

	FY 85	FY 86	FY 87	TOTAL
Quanity (Airframe)	78	78	78	234
Annual Contract ($)	321.7	345.4	372.1	1,039.2
Multiyear Contract ($)	304.9	319.9	332.5	957.3
Difference ($)	16.8	25.5	39.6	81.9

Source of Savings	Cost Savings ($)
Inflation	31.5
Vendor Procurement	42.8
Manufacturing	7.6
Design/Engineering	
Tool Design	
Support Equipment	
Other	
TOTAL	81.9

Inflation: Cost savings or cost avoidance from inflation is expected to accrue because of earlier procurement of the materials for the outyears.

Vendor Procurement: Cost savings or cost avoidance in this category will result from increased competition and more economical production rates.

Manufacturing: Cost savings or cost avoidance is expected to result from a decrease in manufacturing in labor due to the amortization of set-up times over longer production runs.

(Attachment 8)

IMPACT OF DEFENSE INDUSTRIAL BASE OF THE MULTIYEAR PROGRAM

1. Improved Competition. Competition at the subcontractor level is expected to continue to expand significantly as a result of the proposed FY 85-87 airframe multiyear contracting. Competitive bids increased from approximately 28 percent of the value of the BLACK HAWK bill of material on single year contracting to better than 50% under the FY 82-84 airframe multiyear contract. The current multiyear trend in this area is expected to remain. Every opportunity to encourage dual sourcing at the subcontractor level has been and is being pursued. The first tier subcontractor plan will be structured to encourage competition at the second tier supplier level, indicating the full utilization of small and disadvantaged businesses.

2. Enhanced Investment. The airframe contractor planned a capital equipment investment expenditure in the amount of $29.2 million of cost reduction, increased capacity and replacement purposes over the period CY 1982-83. Future airframe contractor capital equipment investment plans are in process.

a. Prime Contractor

Commencing with the FY 82-84 airframe multiyear contract planned equipment improvements for Sikorsky included:

(1) Procuring a Direct Numerical Control (DNC) system for machine shop main control room which provides automated information flow from engineering data base to various numerically controlled machines. This equipment will eliminate punched tapes, avoid trial runs, and facilitate monitoring machine operations.

(2) Developing an automated System for retrieval of parts in stores.

(3) Procuring a transfer System for automated movement of components between machines in the machine shop.

b. Subcontractors

(1) Procuring and installing a new press for sheet metal formed parts at Aircraft Hydroforming, California, a supplier of titanium components for the main rotor blade.

(2) Committing funds and procuring a new burn-chamber and test equipment in the manufacture and servicing of trim actuators at Curtis Wright, New Jersey, manufacturer of trim actuators.

(3) Building a new facility utilizing the BLACK HAWK business as justification for such expansion at Windsor Manufacturing, Connecticut, BLACK HAWK source of machine components such as pressure plates.

(4) Adding a new machining center at Macor Incorporated, Long Island, New York, Machining vendor.

3. Improvement in Vendor Skill Levels. Training programs for first time subcontractors will continue to be initiated on an as required basis, especially in the highly skilled trades areas.

4. Training Programs: Sikorsky Aircraft's manning levels for the UH-60A BLACK HAWK airframe program are at peak, thereby sustaining a requirement for new training programs. Existing training programs for Sikorsky Aircraft and its component subcontractors will continue.

5. Progress Payment Changes: As an alternate to the Standard Program Payments Clause, the airframe contrator has requested Flexible Progress Payments. The airframe contractor will extend the progress payment provisions to his subcontractors.

6. Use Of Multiyear Contractors (Vendors): Subcontractors will receive purchase orders for the total quantity authorized for the prime contract.

7. Increased Production Capacity: Present tooling can produce approximately 17 aircraft per month at the prime contractor. This capacity is more than adequate to accomodate the FY 85-87 airframe multiyear contract. The airframe contractor plans to enhance the availability of different parts and materials by adding multiple sources, that is, splitting requirements between two or more suppliers. This action will provide relief for potential production bottlenecks.

(Attachment 9)

PRESENT VALUE ANALYSIS
($ in Millions)

Program UH-60A BLACK HAWK

	Outlays								
	FY 84	FY 85	FY 86	FY 87	FY 88	FY 89	FY 90	FY 91	TOTAL
Annual Proposal									
Then Year $	4.4	57.0	176.7	298.9	280.2	170.1	39.3	12.6	1,039.2
FY 84 Constant $	4.4	53.6	156.5	250.2	221.7	127.2	27.8	8.4	849.8
Present Value	4.2	46.5	123.3	179.4	144.5	75.3	15.0	4.1	592.3
Multiyear Proposal									
Then Year $	11.9	74.6	188.6	273.1	234.7	134.1	31.0	9.3	957.3
FY 84 Constant $	11.9	70.1	167.1	228.7	185.7	100.3	21.9	6.2	791.9
Present Value	11.3	60.8	131.7	164.0	121.1	59.4	11.8	3.0	563.1
Difference									
Then Year $	-7.5	-17.6	-11.9	+25.8	+45.5	+36.0	+8.3	+3.3	+81.9
FY 84 Constant $	-7.5	-16.5	-10.6	+21.5	+36.0	+26.9	+5.9	+2.2	+57.9
Present Value	-7.1	-14.3	-8.4	+15.4	+23.4	+15.9	+3.2	+1.1	+29.2

(Attachment 10)

MULTIYEAR PROCUREMENT CRITERIA

Program EH-60A QUICK FIX

SEE THE MULTIYEAR PROCUREMENT CRITERIA FOR THE UH-60A BLACK HAWK PROGRAM.

(Attachment 11)

ACQUISITION STRATEGY COMPARATIVE SUMMARY
($ in Millions)

Program EH-60A QUICK FIX

	ANNUAL CONTRACTS	MYP ALTERNATE
NUMBER OF UNITS (AIRFRAMES)	54	54
TOTAL CONTRACT PRICE	239.8	220.9
CANCELLATION CEILING	N/A	N/A
$ COST AVOIDANCE OVER ANNUAL		18.9
% COST AVOIDANCE OVER ANNUAL		7.9
RISK RELATED FACTORS		
- REQUIREMENT STABILITY	LOW	LOW
- FUNDING STABILITY	LOW	LOW
- CONFIGURATION STABILITY	LOW	LOW
- COST CONFIDENCE	LOW	LOW
- CONFIDENCE IN CONTRACTING CAPABILITY	LOW	LOW

NOTE: This proposal reflects a three year FY 85-87 airframe multiyear contract with termination liability funding of expanded advance procurement.

(Attachment 12)

TOTAL PROGRAM FUNDING PLAN
($ in Millions)

Program EH-60A QUICK FIX

	FY 84	FY 85	FY 86	FY 87	TOTAL
Quantity (Airframe)		18	18	18	54
Annual Program					
End Item		206.7	200.8	203.8	611.3
Less Advance Funding		16.7 1/	21.7	13.5	51.9
Net Request		190.0	179.1	190.3	559.4
Advance Funding	17.1	21.9	19.3	0	58.3
(For FY 85)	15.5	0	0	0	15.5
(For FY 86)	1.6	20.1	0	0	21.7
(For FY 87)		1.8	11.7	0	13.5
(For FY 88)			7.6		7.6
Total Budget Request 3/	17.1	211.9	198.4	190.3 4/	617.7
Multiyear Program					
End Item	0	202.9	194.9	194.6	592.4
Less Advance Funding	0	23.2 1/	29.3	24.9	77.4
Net Request	0	179.7	165.6	169.7	515.0
Advance Funding	29.9	30.1	23.8	0	83.8
(For FY 85)	22.0	0	0	0	22.0
(For FY 86)	6.1	23.2	0	0	29.3
(For FY 87)	1.8	6.9	16.2	0	24.9
(For FY 88)			7.6		7.6
Total Budget Request 3/	29.9	209.8	189.4	169.7 4/	598.8
TOA Difference	-12.8	+2.1	+9.0	+20.6	+18.9

Outlays	FY 84	FY 85	FY 86	FY 87	FY 88	FY 89	FY 90	FY 91	TOTAL
Annual	2.4	36.0	109.9	180.9	161.4	97.5	22.5	7.1	617.7
Multiyear	4.1	40.0	112.7	174.9	150.9	89.3	20.5	6.4	598.8
TOA Difference	-1.7	-4.0	-2.8	+6.0	+10.5	+8.2	+2.0	+.7	+18.9

NOTES:

1. Includes $1.2M prior year advance funding from FY 83
2. The cost profile reflects a FY 85-87 airframe multiyear contract funded program.
3. This represents a preliminary cost estimate accomplished without the benefit of single year or multiyear contract cost proposals.
4. Excludes advance procurement in FY 87 for follow-on procurement.

(Attachment 13)

CONTRACT FUNDING PLAN
($ in Millions)

Program EH-60A QUICK FIX

	FY 84	FY 85	FY 86	FY 87	TOTAL
Quantity (Aircraft)		18	18	18	54
Annual Program					
End Item		74.2	79.7	85.9	239.8
Less Advance Funding		7.4	8.0	8.6	24.0
Net Request		66.8	71.7	77.3	215.8
Advance Funding	7.4	8.0	8.6	0	24.0
(For FY 85)	7.4				7.4
(For FY 86)		8.0			8.0
(For FY 87)			8.6		8.6
TOTAL BUDGET REQUEST	7.4	74.8	80.3	77.3	239.8
Multiyear Program					
End Item		70.4	73.8	76.7	220.9
Less Advance Funding		13.9	15.6	20.0	49.5
Net Request		56.5	58.2	56.7	171.4
Advance Funding	20.2	16.2	13.1	0	49.5
(For FY 85)	13.9				13.9
(For FY 86)	4.5	11.1			15.6
(For FY 87)	1.8	5.1	13.1		20.0
TOTAL BUDGET REQUEST	20.2	72.7	71.3	56.7	220.9
TOA Difference	-12.8	+2.1	+9.0	+20.6	+18.9

Outlays	FY 84	FY 85	FY 86	FY 87	FY 88	FY 89	FY 90	FY 91	TOTAL
Annual	1.0	13.2	40.8	69.0	64.7	39.2	9.1	2.8	239.8
Multiyear	2.7	17.2	43.6	63.0	54.2	31.0	7.1	2.1	220.9
TOA Difference	-1.7	-4.0	-2.8	+6.0	+10.5	+8.2	+2.0	+.7	+18.9

NOTE: This represents a preliminary cost estimate accomplished without the benefit of single year or multiyear contract cost proposals.

(Attachment 14)

IMPACT OF INFLATION ON FUNDING
($ in Millions)

Program EH-60A QUICK FIX

	TOA ($ in Millions)				
MULTIYEAR PLAN	FY 84	FY 85	FY 86	FY 87	TOTAL
Contract					
+2%	21.0	77.1	77.2	62.6	237.9
+1%	20.6	74.9	74.2	59.6	229.3
Budget	20.2	72.7	71.3	56.7	220.9
-1%	19.8	70.5	68.5	53.9	212.7
-2%	19.4	68.4	65.8	51.3	204.9
Total Program					
+2%	31.1	222.6	205.0	187.4	646.1
+1%	30.5	216.2	197.1	178.4	622.2
Budget	29.9	209.8	189.4	169.7	598.8
-1%	29.3	203.6	181.9	161.4	576.2
-2%	28.7	197.5	174.7	153.4	554.3
ANNUAL PLAN					
Contract					
+2%	7.7	79.4	86.9	85.3	259.3
+1%	7.5	77.1	83.6	81.2	249.4
Budget	7.4	74.8	80.3	77.3	239.8
-1%	7.3	72.6	77.1	73.5	230.5
-2%	7.1	70.4	74.1	69.9	221.5
Total Program					
+2%	17.8	224.9	214.8	210.1	667.6
+1%	17.4	218.3	206.5	200.0	642.2
Budget	17.1	211.9	198.4	190.3	617.7
-1%	16.8	205.6	190.6	181.0	594.0
-2%	16.4	199.4	183.0	172.0	570.8

(Attachment 15)

SAVINGS AND COST AVOIDANCE
($ in Millions)

Program EH-60A QUICK FIX

	FY 85	FY 86	FY 87	TOTAL
Quantity (Airframe)	18	18	18	54
Annual Contract ($)	74.2	79.7	85.9	239.8
Multiyear Contract ($)	70.4	73.8	76.7	220.9
Difference ($)	3.8	5.9	9.2	18.9

Source of Savings	Cost Savings ($)
Inflation	7.5
Vendor Procurement	9.7
Manufacturing	1.7
Design/Engineering	
Tool Design	
Support Equipment	
Other	
TOTAL	18.9

Inflation: Cost savings or cost avoidance from inflation is expected to accrue because of earlier procurement of the purchased parts and materials for the outyears.

Vendor Procurement: Cost savings or cost avoidance in this category will result from increased competition and more economical production rates.

Manufacturing: Cost savings or cost avoidance is expected to result from a decrease in manufacturing labor due to the amortization of set-up times over longer production runs.

(Attachment 16)

IMPACT OF DEFENSE INDUSTRIAL BASE OF THE MULTIYEAR PROGRAM

1. Improved Competition. Competition at the subcontractor level is expected to continue to expand significantly as a result of the proposed FY 85-87 airframe multiyear contracting. Competitive bids increased from approximately 28 percent of the value of the BLACK HAWK bill of material on single year contracting to better than 50% under the FY 82-84 airframe multiyear contract. The current multiyear trend in this area is expected to remain. Every opportunity to encourage dual sourcing at the subcontractor level has been and is being pursued. The first tier subcontractor plan will be structured to encourage competition at the second tier supplier level, indicating the full utilization of small and disadvantaged businesses.

2. Enhanced Investment. The airframe contractor planned a capital equipment investment expenditure in the amount of $29.2 million of cost reduction, increased capacity and replacement purposes over the period CY 1982-83. Future airframe contractor capital equipment investment plans are in process.

a. Prime Contractor

Commencing with the FY 82-84 airframe multiyear contract planned equipment improvements for Sikorsky included:

(1) Procuring a Direct Numerical Control (DNC) system for machine shop main control room which provides automated information flow from engineering data base to various numerically controlled machines. This equipment will eliminate punched tapes, avoid trial runs, and facilitate monitoring machine operations.

(2) Developing an automated System for retrieval of parts in stores.

(3) Procuring a transfer System for automated movement of components between machines in the machine shop.

b. Subcontractors

(1) Procuring and installing a new press for sheet metal formed parts at Aircraft Hydroforming, California, a supplier of titanium components for the main rotor blade.

(2) Committing funds and procuring a new burn-chamber and test equipment in the manufacture and servicing of trim actuators at Curtis Wright, New Jersey, manufacturer of trim actuators.

(3) Building a new facility utilizing the BLACK HAWK business as justification for such expansion at Windsor Manufacturing, Connecticut, BLACK HAWK source of machine components such as pressure plates.

(4) Adding a new machining center at Macor Incorporated, Long Island, New York, Machining vendor.

3. Improvement in Vendor Skill Levels. Training programs for first time subcontractors will continue to be initiated on an as required basis, especially in the highly skilled trades areas.

4. Training Programs: Sikorsky Aircraft's manning levels for the UH-60A BLACK HAWK airframe program are at peak, thereby sustaining a requirement for new training programs. Existing training programs for Sikorsky Aircraft and its component subcontractors will continue.

5. Progress Payment Changes: As an alternate to the Standard Program Payments Clause, the airframe contrator has requested Flexible Progress Payments. The airframe contractor will extend the progress payment provisions to his subcontractors.

6. Use Of Multiyear Contractors (Vendors): Subcontractors will receive purchase orders for the total quantity authorized for the prime contract.

7. Increased Production Capacity: Present tooling can produce approximately 17 aircraft per month at the prime contractor. This capacity is more than adequate to accomodate the FY 85-87 airframe multiyear contract. The airframe contractor plans to enhance the availability of different parts and materials by adding multiple sources, that is, splitting requirements between two or more suppliers. This action will provide relief for potential production bottlenecks.

PATRIOT

Senator **Rudman**. Let's turn to the Patriot missile system for a moment. We understand that the Army's Materiel System Analysis Agency report on recent system design confirmation tests concluded reliability was about 30 percent of the rate achieved earlier in the prototype. What were the results of that test, as it is a very important system, and a very expensive system? Are you familiar with that test to which I am referring?

General **Kenyon**. Yes, sir, I am familiar with the test, which is a test that was defined and undertaken by the project manager related to earlier operational testing.

I can't give you the precise data, however, I believe, the failure isolation rate of the built-in fault diagnostics in this test had been increasing on a ramp. It had been previously in the 60 percentile region, and that test validated that we were a little better than 70 percent of correct fault diagnostics, as were charging for a goal of about 90 percent.

The other data to which you may be referring, I don't have that in my memory at this time. I can ask Colonel Liberatore, or I can provide it for the record.

Senator **Rudman**. Why don't you provide a copy of the report of those test results for the record. That is a very important system and we would like to have it as part of the hearing record.

General **Kenyon**. Yes, sir.

[The information follows:]

Patriot Test Result

A copy of the Patriot test results is being provided to the committee under separate cover.

PERSHING II

Senator **Rudman**. Let's move on to Pershing II. What happened last week? The 13th flight failed. Does anybody know what the problem was yet?

General **Kenyon**. Sir, that was the Sunday shot. You know that we are tracking very carefully on getting the information. My last update was this morning. I was told that the initial comprehensive diagnosis of the telemetry was to take place at a meeting at 7 o'clock. I do not have that information, but I would commit to supply.

Senator **Rudman**. Submit it to us even after the record is closed, because the committee would like to know about that.

General **Kenyon**. Yes, sir.

[The information follows:]

Pershing II Failure

The 13th Pershing II flight was conducted on June 24, 1983 at White Sands Missile Range.

Approximately one second after the reentry vehicle began the pull-up/pull-down maneuver (which is designed to reduce velocity), it began a roll-rate oscillation. This oscillation grew in amplitude and apparently caused the reentry vehicle to become unstable and fly off-course.

The most probable cause is a short circuit caused by wiring from a servo-mechanism coming in contact with a hot (1100°F) gas exhaust tube, and burning through the insulation on the wiring. The routing of the wiring has been altered and additional insulation has been added to the cables.

STINGER AIR DEFENSE MISSILE

Senator **Rudman**. We understand, on the Stinger air defense missile that a new evolutionary version of it has been approved for low-rate initial production in fiscal year 1984, about $78 million. That is really before the first development dollar is provided by Congress for that evolution.

Why should we fund procurement in 1984, before that development begins? Is this developed in a way that we don't quite understand?

General **Kenyon**. No, sir, Senator Rudman. The program that we had submitted to you for approval, initiating production in 1983, was, of course, the Stinger postmissile, the follow-on to basic Stinger. The development of the Stinger post was completed last year, and an operational test was undertaken.

The Stinger post was a comprehensive and detailed development, and we were faced this spring with making one of two decisions related to that program. We could have produced the successfully developed Stinger post. However, at the time we were making that decision, our intelligence community, the entire intelligence community, came to the Army, and I can't talk to the details of this in open hearing, but [deleted].

There appears to be a fairly rapid evolution of this threat in this area, and the Army has, therefore, internally made a decision that we would prefer, rather than producing Stinger post as we totally developed it, to make what we consider to be a minor change, and that is to put a small amount of the algorithms on the outside of the missile, such that in the future we can change this small component rather than going to the internals of the system and redeveloping it.

Senator **Rudman**. You are essentially talking about having it operated in a different electronic environment than you would originally have anticipated. Is that what you are essentially saying?

General **Kenyon**. Yes, sir. It is not only electronics, but it has to do with the heat flares, and so forth.

Senator **Rudman**. Right.

General **Kenyon**. The application of our 1983 finding has gone toward the initial production facilitization on the Stinger post missile. There is a high percentage, my mind tells me 90 percentile, of commonality between what we are doing and what we ask you to do.

We will not move out and commit to that program until we come to you with a reprograming action of 1983 to attempt to change some procurement money to RDT&E, with your full knowledge, understanding, and approval. If it is not granted, we will then return, probably, to our program of Stinger posts.

M-113 AND THE BRADLEY VEHICLE

Senator **Rudman**. We may have some other questions on that, and we will get to them. This is a very important area actually, and we would like to know as much as we could about it.

I want to talk to you briefly about the Bradley and the M-113. The proliferation of antiarmor weapons on the battlefield make it, in many people's view, very difficult to safely employ the M-113 on the modern battlefield. I think the Israelis certainly would agree with that, and certainly the Syrians would. I am wondering why we are putting in for 1,052 of those M-113's, and their derivatives for about $203 million, or are we changing our doctrines in terms of where we deploy them?

General KENYON. Sir, we are doing a combination of two things.

No. 1, as you have stated, a large proportion of the M-113 vehicles requested are for derivative vehicles, the improved TOW-vehicle, and fire support team vehicle, the M-577 command post, and so forth. These vehicles in these configurations are not meant primarily to carry infantry troops right up to the forward line of troops or the line of contact. They are meant to stand off and do other functions.

The second aspect, the proliferation and the enhanced capabiity of antiarmor on the battlefield, has caused us to address with a great deal of emphasis the operational concepts of the Bradley vehicle. As we are evolving the doctrine and use of the Bradley—General Mahaffey, the Deputy Chief of Staff for Operations and Plans, is much more articulate at this than I—we team, of course, in the mechanized and the armor forces, the Bradley and the tank.

The Bradley, as you get to antiarmor concentrations, or antiarmor fire, basically pulls into a defilade and can attack the antiarmor both with a much longer range 25 millimeter Bushmaster or the TOW. As you know, we are going ahead and putting the full TOW 2 capability on the Bradley vehicle, and that permits the tank to start to close with those other systems out there, the other armor systems.

So it is a standoff overview attempt to kill or degrade the antiarmor, and then move that Bradley up, whereas you move the M-1 first, which has a significantly greater degree of antiarmor system capability.

BRADLEY OPERATIONAL CONCEPT

Senator RUDMAN. Of course, the Bradley originally was designed as a fighting vehicle with firing ports for the infantry. I had an opportunity to be down at Benning, and go through that whole thing with them down there.

Is the Army having any serious second thoughts as to the fact that it will be used as an infantry fighting vehicle in the way is was originally thought of? Are they changing maybe some of its configuration because of that environment, or is that a better question for somebody else? It is one that is very much on my mind.

General KENYON. I will try, Senator Rudman.

I know of no major configuration changes being considered at this time in the vehicle. However, I believe, going back to your last question, we have changed from the O&O concepts. In fact, a gentleman who frequently takes us to task by the name of Mr. Ambrose, has taken us through that also.

A little over 1 year ago, when he was at Fort Benning, they showed some pictures of the M1 tank and the Bradley running side by side and going into battle. He brought up the same question that you just brought up. This was more of a marketing film that did not accurately portray tactics, and they have had to work and correct that.

In addition to that, though, we have changed things. Like I said, the Bradley on a sophisticated antiarmor battlefield would stand off. If you had a Bradley in a lesser intensity conflict, perhaps in a Middle East, an RDF scenario, you probably still would profit from firing port weapons and closing with troops that had less sophisticated weapons.

Senator **Rudman**. I think we are going to be taking a very hard look at the total Bradley acquisition over time. It may well be that we will go for the entire amount. However, speaking as one with a very limited amount of experience, but nevertheless some experience is better than none; it just seems to me that most infantrymen getting up into that area would like to get out of the thing, get on their hands and knees, and crawl the last 400 yards. The infantryman is really terribly vulnerable in a defilade position, with a light antiarmor weapon. It would just become a flaming coffin. I expect that you would find the infantry piling out of those things very quickly as they got up into that area, and that is why I asked about configuration.

General **Kenyon**. Of course, the operational concept is that they would dismount. They are not in it, and the Bushmaster provides the covering fire, and several other things. Some day, if we have the opportunity, I would like to talk to you about the flaming coffin comment.

M-1 AMMUNITION

Senator **Rudman**. I will be happy to do that at your convenience, General **Kenyon**. I am very interested in all of those systems.

We have a number of questions, and I am fast running out of time, not having expected to chair this hearing this morning. So I am going to submit some for the record, and continue with some that we probably ought to ask you here.

There are a number of questions on the M-1 tank, with the production rates, and some other questions, and we are going to submit those for the record. I want to talk just briefly about the 120 millimeter program for the M-1. We have had a number of reports on that. You have asked for some money in here for various types of antiarmor rounds. You don't have anything in your request this year for HE rounds. I think you have not really furnished us the information on the testing that is going on the prototype qualification on the M-1E1.

Could you comment briefly on what you are looking, and what your rationale is for the request that you have in front of us and how that testing program is going?

General **Kenyon**. Sir, I would like to address it briefly, and then I would provide the follow on detail for the record in that I am not totally familiar with that.

Senator **Rudman**. All right.

[The information as follows:]

M1E1 Testing Program

The fiscal year 1984 request for 120mm ammunition supports war reserve and training requirements for three cartridges. These are the XM 829 (kinetic energy vservice round), the XM 865 (training round for the XM 829), and the XM 831 (training round for the high explosive antitank cartidge XM 830). Testing programs for these rounds are on track and the Type Classification [TC] dates are:

	TC limited production	TC standard
XM 829		December 1983.
XM 831	March 1983	August 1983.
XM 865	March 1983	December 1983.

Additionally, the US High Explosive Antitank Multipurpose-Tracer (HEAT-MP-T) cartridges, XM 830 is scheduled for type classification in August 1984 but will not be available for production until fiscal year 1985. However, the Army is examining the acceptability of purchasing a limited quantity of the German equivalent DM 12A1 cartridges as an interim measure to provide both type of service rounds to support the fielding of the M1E1 tank.

M1E1 PROTOTYPE TESTING

General **Kenyon**. We are continuing the M–1E1 prototype qualification testing at Aberdeen, which I believe you have seen before. We have had some minor design changes which have to do with the fightability of that system as you put the 120 gun in it, and you change the space allocation within the turret. I cannot address the 120 ammunition development at this point in time, and I will provide that for the record.

I believe that we are on track in the testing. That is ongoing and we can provide the information for initiating and making our initial commitments to the production of the M–1E1 at about the end of this calendar year.

COMBAT UNIT SHORTAGES OF SPARES EQUIPMENT

Senator **Rudman**. All right, let me ask you just one other question on M–1 and M–60A3. Many of those units supporting the Army's frontline weapon systems, in Europe in particular, don't have the spares, the tools, the test equipment, the levels that they ought to have. They are quite short on them, and yet these units are rated C–1, the Joint Chief designation for fully combat ready.

General Hesson, the Director of Plans and Operations for the Deputy Chief of Staff for Logistics testified that "to some extent, all of the Army's 75 frontline maintenance units are short of needed spares, tools, and other essentials." How are we going to address that, General Falter?

General **Falter**. We have a number of things, sir. First of all, we are in the process of programing, under the total system concept, of getting the tools and test equipment that is going to be necessary for the support units, to support organizations as they convert.

The way our tables of organization are set up, as we phase an M–60A3 tank battalion or an M–60 tank battalion into a M–1 battalion, we convert the tables of organization and equipment. The flaw that historically has existed, we can only work the tables of organization and equipment so fast, and as a result we have not converted the general support maintenance and the direct support maintenance units at the same rate.

The way we are getting around that, we are making incremental changes now to these tables of organization, because for an extended period of time a direct support maintenance battalion is going to have to support both the M-60 tanks and the M-1's. Because in their area of responsibility they are going to have both, so they need double sets of equipment.

We are in the process of phasing not only the sets of additional equipment in, but the prescribed loading list items of repair and spares as well as the trained people. So we have a constant intensive management process that exists to make that conversion occur.

I think for additional information, I would refer to Mr. Berg, from the Deputy Chief of Staff for Logistics, who has looked at that area.

Mr. **Berg**. We have a constant effort, as I think you know, and we are running approximately 88 percent fill on the authorized stockage lists (ASL) and prescribed load lists (PLL) in those units now. There has been concentrated management on what shortages we have, and there have been some. In fact, the engines you mentioned; there was a shortage of those.

The project manager [PM] staff is established and it has a concentrated management team looking at shortages and making sure that we make distribution in the most critical areas. But we have been meeting the operational requirements at 90 percent, and it is improving dramatically as we proceed down the learning curve.

So, we feel that with the 17 battalions that we are fielding by the end of this fiscal year, and with the PLL's and ASL's, and with the reserve and maintenance float tanks to go with them that we are doing all right.

M-1 MAINTENANCE SCHEDULES

Senator **Rudman**. Of course, you have a special problem with the M-1, and this is not said critically. This really is a very complex program compared to what you have been working with. The records and the trends indicate that 13 percent of the inventory is going to require overhaul annually as opposed to 2 percent of the M-60 fleet. I am not sure if that is straight M-60 or M-60A3. Is that accurate?

Mr. **Berg**. Sir, that was really based upon, as we see it now, early engineering estimates and early test results. As you know, we experienced more difficulties in the test; if you prorate those out, they are higher. I don't believe it will be that high.

Senator **Rudman**. So you don't believe that the figure of 3,800 annual maintenance hours for the M-1 versus 2,000 for the M-60, I am not sure which version—you don't think that is right either.

Mr. **Berg**. We don't think that that is the right proportion, but we know that the more complex M-1 will be somewhat higher.

Senator **Rudman**. We would expect it to be, because it has systems in it that the others don't have, but it shouldn't be that much more, should it?

Mr. **Berg**. We have been doing other things systematically across the board to improve maintenance and to reduce that type of thing. With our combat vehicle evaluation capability, we have changed over from a mileage rate criteria to an actual condition selection criteria. Which vehicles will go into depots will be determined by actual need, not arbitrary mileage figures as in the past. This will result in reduced depot maintenance for many vehicles.

We expect improvement in the maintenance of the M-1, for instance, because of the modular concept of the engine. The module will come back to the depot in many cases, instead of the entire engine.

Senator **Rudman**. Mr. Berg, when will you have some figures that we can start looking at that will look better than the ones that we are looking at?

It is like the kid who is a real bad boy in the first grade, and his reputation stayed with him through high school. Although he was an honor student, they always remember that kid in the first grade. We keep hearing reports on the M-1, about how awful it is, and I have seen some up-to-date reports that are rather good. When are you going to submit those to us so that we can have them as updated information, instead of looking back at this other information, which really is worse than it truly is?

Mr. **Berg**. I think within the next 30 to 60 days.

Senator **Rudman**. When you have updated reports on that, I am sure the chairman would like to have them submitted to the subcommittee so that we do have correct information.

General **Falter**. Mr. Chairman, in that regard, earlier in a response to your question about what I thought of the CBO study, I referred to the fact that there were some assumptions in there and some data that we are not sure is correct, but we thought that it was a useful exercise, and this is a perfect example.

One of the things that they came up with in the study, they used that 13-percent figure, and that is a figure that the Army in the past has used itself. The source of the data was the Army, but as we began looking at what is going on in the area, we found out that our tank-automotive command, in fact, has been scrubbing that data and they are fairly well convinced that it is going to be down somewhere in the vicinity of the original engineering estimate.

We expect that data to be released within the next few weeks, as Mr. Berg has indicated, and we will provide it to you. As I said this was an area where the study was a useful thing in that we were using data that was very clearly wrong.

Senator **Rudman**. The sooner, the better, because much of the campaign against the M-1, I think, is based on faulty information. I think the Army has a lot of problems, but I don't think the M-1 right now is one of those problems. I think we ought to have up-to-date information on that.

TRISERVICE TACTICAL COMMUNICATION PROGRAM

I have one last question. The staff has discussed with me the triservice tactical communication program. In addition to the $93.5 million provided last year, the Army is requesting $96.8 million in

1984 for the nodal control element. The Air Force's request is $129.8 million in fiscal year 1984.

We understand that at the last program review, a requirement for additional funding surfaced. Also, I believe I am correct to say that there is product improvement available to the existing message switch which supposedly is going to save some staggering amount of money. The figure here, and I can't believe it, is $3 billion. It doesn't seem possible, over the entire program, of course.

Is there any reason why we do not go right ahead and adopt this product improvement using the fiscal 1983 funds and save the fiscal 1984 funds; is that something we ought to consider?

General **Falter**. Sir, we will have to take that one with us.

Senator **Rudman**. Will you get back to us on it?

General **Falter**. We will get back to you with a specific answer on it.

Senator **Rudman**. All right.

[The information follows:]

TRISERVICE TACTICAL COMMUNICATIONS PROGRAM

The Army is presently reviewing alternatives to determine the most cost effective way of satisfying the nodal control requirement. One alternative is the modification of the AN/TTC-39 circuit switch. The other alternative is a new proposal from Martin Marietta for a reduced-scope Communications Nodal Control Element (CNCE); cost and schedule information for this alternative will not be available to the Army until mid July. This information is needed to enable the Army to complete its analysis and make a decision on which alternative to pursue.

SUBMITTED QUESTIONS

Senator **Rudman**. Additional questions for the record will be inserted at this point.

[The following questions were not asked at the hearing, but were submitted to the Department for response subsequent to the hearing:]

ADDITIONAL COMMITTEE QUESTIONS

OPERATING AND SUPPORT COSTS

QUESTION: General Davis, we have again heard somewhat disturbing cost projections from CBO on the Army's modernization program. The CBO analysis is drawn from Army statistics. Do you have any valid argument against the assessment?

ANSWER: In several cases, the CBO study has used assumptions that do not reflect projected operating conditions or the latest available program information. Specifically,

- CBO assumed that an additional $560 million might be required to perform depot level overhaul on equipment being displaced to the Reserve Components. This figure was based on the assumption that "all of it augmented current numbers and the overhaul cycles are similar to active forces." Neither of these conditions exists in the current Army program. First, there is not a one-for-one transfer of equipment from the active units to the Reserve Components since some of the "displaced" active equipment goes, instead, to meet our POMCUS and War Reserve and later deploying active unit needs. Second, overhaul cycles are based on established operating tempos for each system, and the Reserve Component operating tempos are significantly below those of the active force by virtue of their limited periods of active training with the equipment.
- CBO stated that "eventual depot maintenance requirements... could well be higher than those now anticipated." This assertion was based on the increase in annual overhaul rates for the M1 tank that was presented in preliminary requirements review assessments after the submission of the President's Budget Program. While the original engineering estimate of 5% annual overhaul rate was used for the FY 1984 President's Budget Program, CBO was advised by the Army that the preliminary requirements assessment indicated that rates could increase to as much as a 13% annual overhaul rate but that these estimates were considered overstated by the Army. The data supporting these increased rates are being reviewed by the Army at this time. While our requirements review has not been completed, latest data indicate that the refined maintenance requirement will be closer to the levels supported in the budget and program.
- CBO stated that "if costs of replenishment spares rise in proportion to those for procurement, they would add another $600M a year by 1988." The replenishment spares program within the Army is not developed on this type of ratio; rather it is modeled on historical customer demands which consider procurement lead times and washout rates. While these model factors do relate to the number of systems in the field at a given time, the price of the end item has no bearing on our computations.

Both the Army and CBO agree that there are direct, if not formalized, relationships among fleet density and operating tempos and the support requirements in the depot maintenance and replenishment spares programs. To ensure that the relationship is accurately established and then used to validate our program and budget estimates in April 1983, the Assistant Secretary of the Army tasked the Comptroller to develop a "methodology which will ensure that the related operating and support components in Army Programs are resourced in a balanced and understandable manner."

The Army's share of the total defense budget has been considered in the budget building. Tradeoffs between procurement and operating programs are necessary both to acquire modern weaponry capable of meeting the threat and of accomplishing our military/national security missions and also to maintain our soldiers' proficiency on these weapons in peacetime. We have a firm commitment not to trade off funds necessary to maintain proficiency and readiness nor the resources necessary to establish and maintain an appropriate quality of life for the peacetime Army and its families. Efforts to drive down training costs, then, become imperative. Expanded use of training devices and simulation will allow us to maintain combat proficiency at lower cost, thus freeing more dollars for procurement of the needed modern weaponry.

The Army will continue to look for ways to optimize our application of resources--reducing the peacetime operating and support costs in all appropriations to the minimum essential levels while using improved acquisition techniques to optimize the delivery of modern hardware within our total dollars.

New equipment fielding is dynamic and unforeseen interrupts can continue to occur. Anticipation of these impacts can at best be estimated, as was done in the FY 1984 budget request. In FY 1982 force modernization was over resourced; in FY 1983 resources are projected to be just about right. Operating costs for systems are adjusted as actual experience supplants engineering estimates. Confidence in operating costs thereby continues to improve. Unpredictable fielding slippage in FY 1984 was anticipated by reducing the force modernization budget request by $250 million (13%). If that number is right, no further action is required. If $250 million is too low, the Army will report excess dollars to Congress. If $250 million is too high, the Army will have to forward to Congress a supplemental or reprograming action to support equipment fieldings, or make programatic changes.

There are a myriad of reasons for the distribution plans being off. They range from production problems and strikes to changing priorities within and among active units, Reserves and the National Guard. More importantly, the Army has made significant improvements in its cost estimating procedures which ties the budget request to the latest distribution plans. By example, the FY 1982 budget request was based on distribution plans published in August 1979; the FY 1984 budget request was based on distribution plans published in August 1983.

The construct of future budget requests will continue to reflect a balanced program to include the Operation and Maintenance Appropriation. The approximately five percent real growth for operation and support of force modernization is consistent within the administration's plan. Should Congress provide a somewhat lower rate of growth, programatic adjustments would be necessary.

Copperhead

Question. What assurance does the Army have that the FY84 and subsequent contracts can be signed to yield a $50,600 unit cost through 1991?

Answer. The contractor has provided written assurance that the unit cost can be maintained at $50,600 or less. Plus, a joint Army/contractor evaluation is ongoing to develop recommendations for cost reduction. Additionally, a study to develop a feasible approach to introducing competition by establishing a second source has begun. Findings from both efforts are expected in time for consideration in the FY85 President's Budget.

Question. Explain why the unit cost jumped 15-20 percent when the fixed investments are complete and some 10,000 rounds have been produced. What has the Army negotiated with the prime to get the cost down to acceptable levels?

Answer. The Copperhead request in FY83 President's Budget was based on an approved program of 44,986 rounds at a cost of $1.4B (escalated) with the last buy in FY 1987. The current approved program is for 30,462 rounds bought through FY 1991. The reduced quantity and extended procurement period contribute to the change in the Program Acquisition Unit Cost from $30.3K (Jan 82) to $54.4K (April 83).

When the FY82 contract deliveries are finished in November 1984, the Army will have bought a total of 8015 rounds (320 were bought during engineering development). As of May 1983, 3245 rounds were bought since october 1981, when production began. Our present FY 1982 contract, which is Firm Fixed Price, is for $138.1M for 3957 rounds a contract unit cost of $34.9K (current year).

Efforts are underway to develop alternatives to reduce the outyear unit cost under the current restructured program, to include studying the feasibility of competing the program at the prime contract level (as encouraged by the Secretary of Defense when he approved the program on 14 April 1983). A joint government/contractor review team is evaluating the current program, and the Army is doing an internal study of competition. Results of these studies will provide additional basis for finalizing the Copperhead request in the FY85 President's Budget.

Question. What program has the Army given up to make room for this $1.6 billion program?

Answer. When the Army restructured the Copperhead program in March 1983, it was done in recognition that it would affect other programs. However, because this decision occurred simultaneously with other trade-off decisions among all Army funds accounts, no specific give-ups traceable to the Copperhead program can be identified.

Question. Previously, production rates were capped at 200 per month because reliability was less than 80 percent. How can you now propose higher production rates?

Answer. Once Copperhead demonstrated an 80% reliability to OSD, the restriction of 200 rounds per month would be removed. In December 1982, OSD relieved this requirement since Copperhead demonstrated an 85% reliability during Lot Acceptance Testing from July through November 1982. Therefore, the FY82 contract has a production rate greater than 200 rounds per month - presently 250 rounds a month.

Question. Has the Copperhead round been certified for internal air shipment aboard Air Force cargo aircraft?
Answer. Yes. It has been certified for internal air shipment as conventional ammunition.

AMMUNITION

Question. The committee understands that since the 1984 budget was prepared, the Army's annual requirements for training ammunition have been reduced. Accordingly, provide for the record by budget line any zero-base budget adjustments requested such that the investment in ammunition stays at the budget level.

Answer. The ammunition training requirements reflected in the FY 1984 budget were based on the Training Ammunition Authorization Committee (TAAC) concept. Subsequent to the budget submission, the Army has revised the ammunition training requirements to reflect the new Standards in Training Commission (STRAC) methodology. The new STRAC assessment resulted in a net reduction in training ammunition requirements. Although there was a net reduction, the STRAC assessment also increased the requirement for some items. The GAO has audited the FY 1984 Budget request recognizing the new STRAC requirements and is recommending the following adjustments in training ammunition:

Item	Reduction ($ millions)
7.62mm Blank	- 8.7
.22 Caliber Match	- .3
20mm All Types	- 3.2
25mm Target Practice	-21.6

GAO has also audited the increased line item training requirements and supports increases to the following items:

Item	Increase ($ millions)
Ctg 5.56mm Blank F/SAW	2.7
Ctg 5.56mm Ball F/SAW	6.1
Ctg Cal .45 Ball	2.4
Ctg Cal .45 Ball WC	.2
Ctg Cal .45 Match	1.0
Ctg 105mm DS-TP	21.4

AH-64 OVERHAUL

QUESTION: Reportedly, the Army is planning that each AH-64 attack helicopter will fly roughly 4,500 hours between overhauls. Based on current flying hour data, this translates to about 22 years between overhauls. Does the Army consider this a reasonable planning assumption?

ANSWER: The Army is not planning to overhaul each AH-64 after 4,500 hours of flight. Overhaul of the basic airframe structure of the AH-64 will be based upon its condition only and operating hours are not a primary consideration. The AH-64 will be integrated into the current airframe condition inspection system used by the Army. This system is based upon a periodic inspection and evaluation of key structural points. The aircraft are then ranked and when indicated, are scheduled for overhaul. The 4,500 hour figure is the design minimum fatigue life for fatigue critical items. When these components reach the 4,500 hour mark, they are removed from service. This figure should not be misinterpreted to be the time between overhaul for the AH-64; however, for purposes of studying long term ownership costs, it is not unreasonable for representing the mean around which the major overhaul interval would fall.

UH-60A BLACK HAWK HELICOPTER

QUESTION: I would like to commend the Army on what I understand are additional savings they have achieved in the Black Hawk multiyear contract as a result of accelerated production deliveries and the economic price adjustment contract clause. I have also heard that the prime contractor has or will return some $10M to the Army on this contract as well. Specifically, how much has the Army saved in addition to the additional estimated savings of $81.1M on this contract?

ANSWER: There is a high potential to accrue the following cost savings on the Fiscal Year 1983-1984 airframe multiyear contract (dollars in millions):

Fiscal Year	1982	1983	1984	TOTAL
Aircraft Quantity	102	96	96	294
Production Acceleration				
Basic (Realized) 1/	-2.1	-1.2	-7.4	-10.7
Options I&II (Estimated) 2/		-3.7	-12.0	-15.7
Economic Price Adjustment (EPA) (Estimated) 3/		-11.1	-19.7	-30.8
Business Base Adjustment (Estimated)		+ 1.5	+ 5.1	+ 6.6
NET Potential Savings	-2.1	-14.5	-34.0	-50.6

1/ Acceleration of production deliveries on the current Fiscal Year 1982-1984 multiyear procurement contract from 8 to 10 aircraft per month through December 1983 will result in the $10.7 million savings.

2/ Exercising contract Options I and II, which sustain aircraft deliveries at 10 per month beyond December 1983 and through completion of the current multiyear contract, would result in an additional $15.7 million in cost savings.

3/ The Economic Price Adjustment Clause in the current multiyear contract allows for cost savings to accrue from lower than expected inflation. These savings will be returned to the Government 6 months after the last aircraft has been delivered on the contract.

QUESTION: Provide for the record annotated copies of Exhibits 2 and 3 of the MYP justification material associated with the T-700 and T-701 engine multiyear contract awarded in May of this year.

ANSWER: The contract is currently in negotiations. Exhibits reflecting the negotiated prices and savings will be submitted to the Committee when the contract has been negotiated and the data becomes available. The estimated contract award date is August 1983.

AH-64 APACHE HELICOPTER

QUESTION: Provide for the record the negotiated recurring unit cost for the recently completed airframe and target acquisition detection system/pilot night vision system for the 1982 and 1983 contracts.

ANSWER: The 1982/1983 negotiated recurring unit costs on Airframe & TADS/PNVS contracts is as follows: ($M ESC)

	1982	1983
Airframe Unit Cost	9.92	5.74
TADS/PNVS Unit Cost	1.87	1.18

Simulators

QUESTION: Why is long lead funding required-FY84 for the AH-1 flight simulator this year when it was not required or budgeted for last year?

ANSWER: The Army's fiscal year 84 budget request is for one complete AH-1 flight simulator, and long lead items funding for two devices to be procured in fiscal year 85. Long lead funds are required to prevent a break in the production cycle, and establish an economical production rate. Because of long lead item funding, the Army will save $3.5 million in procurement, and receive the last two devices nine months earlier. Additionally, the earlier delivery of the devices will save the Army 5062 hours from the flying hour program, and a concommitant cost avoidance of $8.6 million. Historically, the Army has requested and received long lead funds for flight simulators. We did not request funds in fiscal year 83 because funding for higher priority programs took precedence.

PATRIOT

QUESTION: Information recently provided to the Committee indicates that contract deliveries continue three to six months behind schedule while costs continue to increase. What specific actions has the Army taken to improve delivery rates?

ANSWER: Susbstantial progress has been shown in achieving and sustaining the throughput rates required to recover to the original contract schedule for Patriot hardware deliveries. Reasons have been identified for the late delivery of production end items and are as follows:

a. Nonavailability of critical Initial Production Facility test equipment.
b. Producibility problems.
c. Late receipt of vendor material.
d. Late staffing of manufacturing areas.
e. Longer test cycle of major hardware.

Corrective actions have been initiated in the above areas to preclude the continued shortfall of hardware. These actions are discussed in the following paragraphs:

a. Nonavailability of Critical Initial Production Facility Test Equipment. Workaround test procedures and Engineering Development test equipment were utilized on-line to support production. Nonavailability of prove-out hardware necessitated the use of first production hardware which contributed to the delay of critical Initial Production Facility capability. Parallel testing has been implemented in order to alleviate production bottlenecks until the test stations are completely on-line. A production set has been designated to remain at the factory to serve as an "Industrial Queen" to enhance the in-house checkout/detection capability relative to latent production problems.

b. Producibility Problems. The initial build of production hardware resulted in the identification of problems associated with large volume production. As a result, active producibility changes were investigated. These producibility enhancements have been identified, qualified, and are being implemented in the second production buy. Various production processes and quality control procedures are being revised and additional test/inspections are being added to further enhance the detection of latent deficiencies within the factory. Specific changes include cable fabrication improvements, additional electrical tests in selected areas, intermediate inspections during integration and temperature cycling at major item level.

c. Late Receipt of Vendor Material. The late receipt of vendor material, both at the component and subassembly levels contributed to late delivery. This was the result of production "start-up" problems being experienced by the vendors. The fiscal year 1981 and fiscal year 1982 production buys have shown substantial progress in material deliveries.

d. Late Staffing of Manufacturing Areas. A late start in hardware production builds was experienced due to delayed staffing in major manufacturing areas. This was compounded by late facility additions, late receipt of vendor material, and difficulty in finding adequately skilled personnel. Presently, the labor force is stable with a more consistent flow of production hardware through the manufacturing areas. Three shift operations have been initiated in some troublesome areas.

e. Longer Test Cycles of Major Hardware. The major end items experienced a longer test cycle than originally estimated. This was compounded by nonavailability of Initial Production Facility test equipment, hardware shortfalls, and producibility problems. Present planning utilizes experienced throughput cycles as a basis for more realistic forecasting of hardware deliveries. It is fully on-line and producibility enhancements have been completely implemented. At the present time, virtually all critical subassembly areas have achieved sustained production rates required to support the planned Government recovery schedule. The two areas of exception (Radar Exciter and Identification Friend or Foe elements) are presently implementing parallel testing, producibility analysis, and additional staffing to support production requirements. This methodology was utilized in the missile forebody area and has proven to be a successful approach.

QUESTION: Also provide for the record your current revised or projected delivery schedules for the fiscal year 1982, 1983, and 1984 contracts.

ANSWER:

FISCAL YEAR 1982 CONTRACT DELIVERIES

	GROUND SUPPORT EQUIPMENT		MISSILES	
CY 83	CONTRACT	PROJECTED	CONTRACT	PROJECTED
SEP	1			
OCT				
NOV	1	1	14	
DEC		1	6	
CY 84				
JAN	1	1	14	13
FEB			15	20
MAR	1	1	15	20
APR	1	1	15	20
MAY	1	1	15	20
JUN	1	1	15	16
JUL	1	1	9	9
AUG	1	1	18	18
SEP			20	20
OCT			20	20
TOTAL	9	9	176	176

FISCAL YEAR 1983 CONTRACT DELIVERIES

	GROUND SUPPORT EQUIPMENT		MISSILES	
CY 84	CONTRACT	PROJECTED	CONTRACT	PROJECTED
OCT	1	1		
NOV	1	1	20	20
DEC	1	1	10	10
CY 85				
JAN	1	1	20	20
FEB	1	1	20	20
MAR	1	1	25	25
APR	1	1	25	25
MAY	1	1	25	25
JUN	1	1	30	30
JUL	1	1	12	12
AUG	1	1	30	30
SEP	1	1	35	35
OCT			35	35
TOTAL	12	12	287	287

FISCAL YEAR 1984 CONTRACT DELIVERIES

	GROUND SUPPORT EQUIPMENT		MISSILES	
CY 85	CONTRACT	PROJECTED	CONTRACT	PROJECTED
OCT	1	1		
NOV	1	1	40	40
DEC	1	1	20	20
CY 86				
JAN	2	2	40	40
FEB	1	1	40	40
MAR	1	1	40	40
APR	1	1	40	40
MAY	2	2	45	45
JUN	1	1	51	51
JUL	1	1	31	31
AUG	1	1	56	56
SEP	2	2	61	61
OCT			61	61
TOTAL	15	15	525	525

QUESTION: What specific cost reduction can be expected from component breakout and anticipated foreign military sales in the fiscal year 84 program?

ANSWER: The fiscal year 84 budget was developed based on breakout of the missile canister and the Engagement Control Station, Information and Coordination Central, and Communications Relay Group shelters. The savings associated with breakout of these components is estimated at $5.0 million. These savings are attributed to contract administration costs which would have resulted from doing business with the Prime Contractor as opposed to direct procurement from the producers of these items. The savings were anticipated prior to the fiscal year 84 budget submission and have been taken into consideration in formulating fiscal year 84 budget requirements.

Currently, there is one fire unit planned for foreign military sales in fiscal year 84. Obviously, there will be some savings to the United States program. However, the savings at this level of foreign participation will be minimal and are estimated at about five percent of the fiscal year 84 budget or an amount that is within the estimating error associated with the budget process.

QUESTION: What are the negotiated fixed price target and ceiling recurring unit costs (at the P-5 level of detail) on the fiscal year 83 contract?

ANSWER: Continuing Resolution Authority and open issues regarding fiscal year 83 funding of Pershing II have precluded definitization of the Patriot fiscal year 83 production contract. Current plans are to definitize a fixed price incentive type contract in the August-September timeframe.

QUESTION: In light of the test results and the continuing delivery problems encountered by the prime contractor, why should the Congress continue to fund the Patriot program at the requested level ($992 million in fiscal year 84)?

ANSWER: In 1981 an extensive series of Secretary of Defense directed tests were completed using engineering developmental hardware to validate that several hardware and software design fixes solved Patriot problems exhibited in earlier tests. The Department of Defense review of these test results conducted in late 1981 stated that the tests had been satisfactorily completed and approved continuing Patriot production.

The final series of Patriot tests began in late 1982 after the first production hardware was received by the Army. The first series of tests on the initial production hardware was designated Component/System Design Confirmation Tests. These tests, which were completed in February 1983, were designed to demonstrate that Patriot has made the transition to production. The testing consisted of five missile firings scripted against a variety of targets under different operating conditions including electronic countermeasures. Four of the missile rounds were subjected to environmental conditioning to include handling, transportation and temperature stress. Search/Track missions included target raid sizes from one to twelve live and numerous simulated targets. The operational verification included mobility, initialization and reorientation exercises using military operators and controllers. Technical manual and safety verification was conducted in parallel with the testing.

Four of the five actual live firings were unqualified successes. One missile self-destructed after a successful launch due to a random failure of a component in the ground based radar. In fact, the overall assessment by independent evaluators indicated that production systems performed as well as or better than development systems except in the area of ground equipment reliability and maintainability. Most of the degradation can be directly attributed to production start-up problems that were not detected prior to actual field use of the equipment. Corrective actions are in process to rectify these problems in the early production sets and are not expected to cause similar problems in subsequent deliveries.

The test data clearly shows that nearly all the Patriot system performance problems discovered prior to the August 1980 Defense System Acquisition Review Council have been corrected. The few problems that remain are not new and it has been known all along that time would be needed to resolve them. The final phase of the Secretary of Defense directed testing Follow-on Evaluation II, conducted by the Army Operational Test and Evaluation Agency at White Sands Missile Range, began in early June 1983. This is an operational test of a Patriot half battalion (three versus six firing batteries along with a headquarters command and control section) in a tactical environment.

Deliveries of production hardware are behind schedule at this time for the reasons outlined in the answer to the earlier question on hardware deliveries. Current projections indicate that deliveries will be back on schedule prior to July 1984 which is prior to completion of the fiscal year 82 contract deliveries.

Funding the Patriot program below the requested level of $992 million in fiscal year 84 will cause the production line to operate at an inefficient rate and result in additional cost.

PERSHING

QUESTION: Assuming the fiscal year 83 supplemental bill is signed soon, describe and provide the details for the record the budgetary changes the Army has had to make in the 1984 budget plan because of this late funding for the 1983 Pershing program.

ANSWER: If the fiscal year 1983 supplemental bill is signed soon, it will not be necessary to make any change to the fiscal year 1984 budget plan. By using all available schedule slack we have been able to avoid irreparable damage to the fiscal year 83 program that would, in turn, necessitate adjustments in the fiscal year 84 program. This, of course, makes it essential that we receive the Pershing II supplemental funds within the next few weeks.

MLRS Multiyear Contract

QUESTION: If Congress did not provide funds to exercise the advanced funding for the fiscal year 1988 (sixth contract year) of the MLRS multiyear contract, would the Army have to renegotiate the entire multiyear contract?

ANSWER: No. Advance funding for fiscal year 1988 is for an economic order quantity option. The five year multiyear contract (fiscal year 1983-1987) is independent of this and all other options associated with fiscal year 1988-1989 procurement.

QUESTION: If the answer is yes, that suggests that the sixth and seventh years of this contract are not, in fact, severable from the five year multiyear contract as directed by Congress and required by public law. Why have you failed to comply with the public law and the direction of the Appropriations Committees?

ANSWER: This situation does not exist, as the answer to the previous question was "no".

QUESTION: In terms of the funds available for up-front investment in multiyear contracts, are the savings available from exercising the sixth and seventh years of this contract now more or less important to the Army than any of the other multiyear candidates proposed in the fiscal year 1984 submit?

ANSWER: Neither of the Army's two fiscal year 1984 multiyear candidates, Armored Combat Earthmover and TOW II missile, require up-front funding for advance materials. However, the availability of such funding for MLRS is significantly important, as without it, at least $86 million of the $193 million estimated savings stand to be lost.

STINGER-POST

QUESTION: The Committee was recently told that a new evolutionary version of the Stinger missile has been approved for low rate initial production by the Army in fiscal year 1984 ($78 million in 1984) before the first development dollar is provided by Congress. Why should Congress fund procurement of this missile in 1984 before the development even begins?

ANSWER: Stinger-POST was designed to counter the postulated threat as it was known in 1977. A more recent assessment of the threat gives it a greater capability for infrared countermeasures.

[Deleted.]

This is the reprogramable microprocessor. The Army has approved a program which will lead to getting the reprogramable microprocessor capability into production as soon as possible, the goal being the first Stinger-POST missile. There are few differences between POST and POST with reprogramable microprocessor, which will allow for a fallback to produce Stinger-POST if the reprogramable microprocessor development is not completed in time for early production. Fiscal year 1984 procurement should be funded because Stinger-POST can be produced until reprogramable microprocessor is ready for production.

QUESTION: The Committee understands that the Army has not approved POST for low rate initial production. What problems has the Army encountered and is the $78.8 million requested still needed?

ANSWER: There are no problems with Stinger-POST in that it met the requirements for which it was designed. A recent change in the threat assessment, however, has caused some limitations in the Stinger-POST's ability to operate in this newly postulated environment. The Army recently approved a program to concurrently develop and produce the Stinger-POST missile upgraded with a reprogramable microprocessor. The purpose of the reprogramable microprocessor is to provide the capability for the Stinger-POST to counter the newly postulated threat while concurrently providing the capability for subsequent changes as the threat evolves. The program, however, requires transfer of fiscal year 1983 Stinger procurement appropriated funds into Research, Development, Test and Evaluation funds. If required Research, Development, Test and Evaluation funds are not obtained, or if problems were encountered during the research and development phase of reprogramable microprocessor, the Army will have provisions to produce Stinger-POST without the reprogramable microprocessor. Procurement funds previously requested are still required.

Bradley Fighting Vehicle System and M113 Vehicles

QUESTION: As you deploy the new Bradley Fighting Vehicle, won't there be enough M113s available to meet existing requirements for the M113s?

ANSWER: At the conclusion of Bradley fielding in FY92, the Army will be using 2,634 M113 in Bradley Fighting Vehicle roles. This will leave 9,751 M113s for use against the 14,303 M113 requirement.

BRADLEY, TOW 2

QUESTION: The Committee has heard of plans to once again incorporate the TOW 2 launcher on the Bradley Vehicle. Is this correct? And, if so, what is the total program and unit cost of this additional capability?

ANSWER: The Army decided in March 1983 that the Bradley TOW 2 system provides essential combat firepower on the modern battlefield through its ability to guide antitank missiles through obscurants and electro-optical countermeasures. The total additive cost of the Bradley TOW 2 program is $207.7 million (escalated, FY 1985-FY 1989), composed of $35.2 million RDTE and $172.5 million procurement funds. The program acquisition unit cost (Nunn-McCurdy) due to the Bradley TOW 2 program will increase by $.03 million (1.02%).

QUESTION: Wouldn't those funds be better spent on buying more Bradley vehicles?

ANSWER: The Army, after considerable study and debate, has concluded that the most cost-effective approach is to provide the TOW 2 capability rather than more vehicles. Threat considerations and increased US effectiveness under jamming and adverse conditions provide the US a significant technological edge over the Warsaw Pact.

QUESTION: Assuming that you have funds in your FY85 budget, what types of off-sets in FY84 might you suggest to start incorporation of the TOW 2 modification in FY84 rather than waiting for FY85?

ANSWER: FY84 procurement funding for TOW 2 on Bradley is required for purchase of long lead items and tooling. The program cannot be accelerated to permit the incorporation of the TOW 2 modification prior to May 1986 (start of FY85 production deliveries).

BRADLEY, M113 VEHICLES

QUESTION: Provide for the record an annotated copy of the Bradley fighting vehicle component multiyear justification materials (Exhibits 3 and 4) reflecting the negotiated contract prices of the contract awarded March 1983.

ANSWER: The multiyear contracts have not been fully negotiated at this time. Negotiations are scheduled to be completed by January 1984 after completion of a Government "should cost" determination. Negotiated contract prices can be provided at that time if still needed.

BRADLEY FIGHTING VEHICLE; TRANSMISSIONS

QUESTION: Provide for the record background information on the increased failure rate from 6 to 30 (for 100 transmissions) found in the Bradley vehicle.

ANSWER: Original failure factors were derived in part through knowledge of experiences with similar systems. Initial budgeting and planning of transmission provisioning used a failure factor of 10 (not 6). In late 1981, a computer database system (Logistics Support Analysis Record (LSAR)) calculated a failure factor of 31, a factor used in budgeting and provisioning procedures since early 1982. Recent LSAR updates (including Initial Production Testing and early field data) have further increased the failure factor to 40.

QUESTION: What steps are being taken to improve the design?

ANSWER: Analysis of transmission failures to date does not indicate problems with transmission design. Problems encountered are related to manufacturing techniques and quality control, areas for which improvement efforts are underway.

QUESTION: Is the redesign and repair of existing inventory being covered by a warranty from the original manufacturer or is it being funded by the Government? What is the total cost to the Government to fix this problem?

ANSWER: There does not appear to be a question of redesign of the transmission. Active analysis of all failures continues to determine if there is a supportable claim of a latent defect against the manufacturer. In the meantime, the Government is repairing transmissions at its own expense. If the evidence of a latent defect is clear enough, it is expected that the Government will be reimbursed. The total cost of repair of the first seven transmissions is $77,000. Fourteen additional transmissions are currently being repaired.

QUESTION: How much money would be needed to start an M113 armor enchancement development program in FY84 to increase the useful life of the some 10,000 M113's which will make up over 60% of the projected inventory of fighting vehicles?

ANSWER: $2.5 million (RDTE).

Bradley, M113 Family

QUESTION: For the record, show the total requirement for the Bradley Fighting Vehicle (M2/M3) and the M113 family of vehicles by role or mission, e.g., ITV, FISTV, mortar carrier, etc. assuming the full 6882 Bradley Vehicles are bought, and what is the projected number of vehicles for each role?

ANSWER:

	AAO (FY85-89 POM)	PROJECTED (FY92)
M2/M3 Fighting Vehicles	17,735	6882
M113 Armored Personnel Carrier	14,303	
used as surrogate fighting veh		2634
used against M113 requirements		9751
ITV	4311	
used as surrogate fighting veh		702
used against ITV requirements		1600
M113 TOW used as surrogate ITV		1471
FISTV	1760	1250
Mortar carriers	2374	2422
M577	5908	4763

QUESTION: You are requesting $177 million for the first 16 aircraft and non-recurring costs. That's about $5.6 million apiece. Next year the price improves only slightly. What are the alternatives to this very expensive program?

ANSWER: There are no good alternatives to the Army Helicopter Improvement Program (AHIP) which can satisfy the Army's requirement for a day/night/adverse weather scout helicopter and compete in terms of cost, effectiveness, and mid 1980's initial operational capability.

The AHIP's sensor package contained in the Mast Mounted Sight (MMS) provides the Army with its first tactical night/adverse weather capability in a scout helicopter. The MMS sensors also provide significant advantages in target acquisition and detection, stand-off capability and reduced exposure to threat weapons systems and precision ranging and laser designation for conventional and laser guided weapons. The new engine, rotor system and stability augmentation will provide improved agility and world-wide operational capability. The automated, integrated cockpit provides improved command and control, reconnaissance and surveillance by allowing the crew to observe more and report it faster.

The Army has looked at the use of attack helicopters as scouts. Although the AHIP is expensive -- the unit procurement cost is $3.05 million in Fiscal Year (FY) 1984 constant dollars -- it is substantially less expensive than either the AH-1S COBRA or AH-64 APACHE attack helicopters. The AH-1S unit procurement cost is $4.72 million and the AH-64 unit procurement cost is $10.45 million in FY 84 constant dollars. The unit costs for the AHIP and AH-64 include the costs of initial spares whereas the AH-1S cost does not include spares which are funded in a separate replenishment spares line. Army analyses have also shown that adding AHIP to a combined arms force improves that force's effectiveness 25 percent more than adding an equal cost number of AH-1S's upgraded with a night sight. Finally, the use of the AH-64 as a scout would suboptimize the most lethal anti-tank system we have.

The Army cannot continue indefinitely to use an aging fleet of OH-58A/OH-6 scout/observation aircraft to perform the current scout mission. These aircraft are virtually day only capable with survivability limited by inadequate standoff capability and the requirement to fully expose the aircraft for surveillance and target acquisition.

In summary, the AHIP is the most cost effective, affordable and least costly method to satisfy the Army's urgent requirement for a day/night/adverse weather scout helicopter.

Army Helicopter Improvement Program (AHIP)

QUESTION. Why not RPV's?

ANSWER. The Remotely Piloted Vehicle (RPV) and the Army Helicopter Improvement Program (AHIP) are complementary, not competitive systems. The AHIP functions are broader than those for the RPV and include coordinating and leading attack and air cavalry team mission, conducting reconnaissance and security, gathering battlefield information, distributing attack helicopter fires, designating targets, adjusting artillery, selecting attack helicopter battle positions, providing local security, and coordinating with ground commanders. The AHIP is oriented towards the threat in Zone 1, the area which extends forward of the friendly front line of troops (FLOT) out to approximately 5 kilometers. The AHIP will observe the threat while positioned just behind the FLOT, and will acquire targets at horizontal stand-off distances with its mast mounted sight sensors. The RPV will pick up target acquisition duties beyond Zone 1, out to the depth of artillery [deleted]. The RPV was examined as an alternative to the scout helicopter in the Advanced Scout Helicopter (ASH) and the AHIP Cost and Operational Effectiveness Analysis (COEA's). The RPV is not optimized to perform critical AHIP tasks - to effectively command and control and distribute fires for attack helicopters. It lacks on-site observers who can judge and react to dynamic combat situations and it cannot effectively coordinate and integrate simultaneous firepower from multiple sources. The RPV also cannot effectively provide security for attack helicopters while the attack aircraft are engaging ground targets. The RPV does complement the AHIP by letting him know in advance the size, composition and route of advancing enemy elements.

QUESTION: What would be the impact of delaying the start of this program one year?

ANSWER: Delaying the award of the initial production contract by one year will result in a corresponding one year delay in the initial operational capability of this urgently needed day/night adverse weather scout helicopter. More importantly, it will force priority attack helicopter units equipped with the AH-64 to operate two years or more without the target acquisition, security, and command and control capabilities of the AHIP that more than double scout attack team effectiveness. In addition, delaying AHIP procurement wll continue to limit scout activities of air cavalry and field artillery units to day, fair weather, short range surveillance and target acquisition.

Deferral of the $177 million AHIP funding from fiscal year 1984 to fiscal year 1985 would result in delaying the first production contract from August/September 1984 to June 1985 or later, depending on when the fiscal year 1985 Defense Appropriation is approved and the terms and conditions of any required Continuing Resolution Authority. This delay would invalidate the not-to-exceed production prices already established for 16 aircraft in fiscal year 1984 and 44 aircraft in fiscal year 1985, and require renegotiation of these not-to-exceed prices without the pressures of competition. The current not-to-exceed prices were negotiated as part of the Engineering Development contract, are favorable to the Government, and provide protection against large cost increases in the transition from development to initial production.

Cost increases of 13 to 20% are estimated for a one year delay in the production program - with a cost increase of approximately $385 million (escalated) being the best estimate at this time. Cost increases result from delaying initial production and extending the production program an additional year to 1991, and increased prices from the prime contractor, subcontractors and vendors resulting from the renegotiation of the not-to-exceed prices. In addition, delaying AHIP production one year could result in the loss of subcontractors and vendors to other military or commercial programs and require re-test and qualification of new components and additional design and production engineering to incorporate these components in the delayed program. Loss of only a few vendors for airframe dynamic components and microprocessor components could result in additional cost growth of $30 million.

New 120MM M-1 Tank (M-1E1)

Question: Recent prototype qualification testing of the 120mm M-1 tank (the M-1E1) highlighted a number of problem areas such as reliable operation of the 120mm system to include firing and extraction, the 120mm system hit probability, and proper operation of the chemical protective system in certain modes of operation. In light of these problems, particularly with the 120mm gun, why should we proceed now with the production of 60 120mm M-1E1 tank in the 1984 program?

Answer:

1. The M1E1 tank is scheduled for initial production in August 1985. During the fall and winter of 1982 and the spring of 1983, some of the problems noted were identified in contractor testing. Preliminary Government testing starts this summer.

2. User tests conducted in the fall of 1982 indicated some fightability problems in the M1E1 turret that precluded smooth and rapid loading of the gun. Fixes have been designed and a follow-on test was conducted in February 1983. The user found the fixes acceptable. Further testing will be conducted during OT II in Oct 83-Jul 84 time frame.

3. In a few isolated instances, problems with extracting spent cases have been encountered. The cartridge cases were analyzed and corrective actions taken to preclude recurrence of these events. The case design changes should solve the extraction problems. Additional rounds to be used in testing are being manufactured at this time. These new rounds will be used in Operational Testing at Fort Hood, Texas.

4. The hit probability of the 120mm gun system is undergoing analysis at this time. Initial testing revealed three problems:

   a. One of the ammunition data cards in the fire control computer had incorrect data entered for one round of ammunition. If final findings indicate that this is the situation, the problem is easily corrected.

   b. The XM830 HEAT and XM831 TP rounds match the accuracy of the German baseline, but do not meet US accuracy user requirements at 2500 meters due to the spike nose and large tail fins, the projectiles have an inherently high drag and are susceptible to increased dispersion at ranges beyond 1,000 meters. Actions have been taken to tighten manufacturing tolerances of the fin within the limits of the baseline technical data package. Improvements to reduce fin erosion which occurs during firing could further improve performance, but it is unknown if the improvement will be sufficient to meet the user accuracy requirement beyond 2,000 meters. Development of the improved HEAT-MP round (XM859) is funded to start in FY84. The XM859 will be designed to meet user requirements and is scheduled for type classification in FY87.

   c. The muzzle reference sensor (MRS) for the 120mm gun is still undergoing tests at Aberdeen Proving Grounds. Germany has fielded this cannon without an MRS and is testing a MRS system also. We are following their progress and plan to test a German MRS in

September and October 1983. The PM is hopeful one of the systems under test will be successful by this fall.

5. The chemical protection system acted to shut down the tank engine under unrealistic conditions. This occurred when the tank turret was rotated several times at high speed with the NBC system on and the engine at idle. We do not anticipate this condition occurring in any operational mode. Nevertheless, the contractor has tested components which prioritize the usage of bleed air to prevent this engine shutdown. All testing to date indicates this redesigned system eliminates this problem.

6. In view of the actions cited above and the urgent need for the 120mm gun to defeat the more difficult threat armor we expect to face, the Army plans to produce the M1E1 on schedule.

M-1 Main Battle Tank

Question: Last year this Committee restricted FY 1983 production rates to 60 vehicles per month because of problems in engine delivery rates, engine quality control and the Army's termination of the RAM-D durability tests. We understand that tanks continue to be held at the plants without engines. What's the problem?

Answer: Since August 1982, three engine production shortfalls have occurred at AVCO-Lycoming Division which have interrupted the flow of AGT-1500 turbine engines to the Lima and Detroit tank plants. These engine shipment delays necessitated that the M1 Program Manager take extraordinary action at the tank plants to insure collateral delays in tank deliveries did not occur. In effect, the program has been to provide augmented engine flow to the tank production line by selective removal of engines from tanks already accepted by the Army. Those engines are returned to the tank assembly line and installed in tanks. Tanks from which engines have been removed are temporarily stored at the tank plants until the engine production shortfall is made up. Engine delivery rates have improved and engineless tanks have dropped from a high of 30 in Feb 83 to 22 as of June 83. Given no unforeseen engine production delays and the progress in making up the engine delivery shortfall, the Army expects to eliminate all M1s without engines by Sep 83. It should be noted that M1 production is on contract schedule and that there have been no unit fielding delays because of the engineless tank problem.

QUESTION: Has the situation improved at AVCO, and if so, how has it improved? Provide details for the record.

ANSWER: AVCO's quantity of engines produced has steadily progressed to the point where they are 15 behind contract schedule at the end of May 1983 versus 50 behind contract schedule at the end of February 1983. Current estimates for June 1983 production are that AVCO will produce 80-85 engines. Production of 85 engines will put AVCO on contract schedule. The situation at AVCO has improved. AVCO is now providing greater quantities of engines with fewer deficiencies. Engines through the tank plants without deficiencies have steadily increased (Feb-73%, Mar-77%, Apr-94%, May-89%). Additionally, AVCO has steadily increased the probability of engines meeting the Army's durability requirement to the point that engines leaving the AVCO plant now exceed the PM's requirement, as shown by the durability audit program. Another positive indicator is the Initial Production Test (IPT) of engines. Two IPT engines have each successfully completed 3614 endurance hours (6000 miles equivalent) without a durability failure, and a third IPT engine is currently undergoing performance and environmental testing. In the production process at AVCO, there has been a marked decrease in the number of test cell failures which has increased the quality and quantity of engines coming out of the plant.

Question: Last year the Congress supported an increase in production from 720 to 855 on the basis of prior year savings but restricted the production to a rate of 60 per month pending completion of the power train durability tests. This year you are requesting $1.4 billion for 720 tanks. Since the durability tests have not been started, it appears that the Army is planning to sustain a 60/month production program for the M-1. Is that correct?

Answer: The Army is not planning to sustain M1 production at 60 tanks per month. Powertrain durability testing is scheduled to be conducted between 1 Aug 83 - Feb 84. By January 1984 sufficient test data should be available for reporting durability performance to Congress. This will provide the basis for increasing production to an average of 67 tanks per month by March 1984, the start of the 13-month FY 1983 funded delivery period (FDP). Production of 855 tanks in the FY 1983 FDP presents no problems to the tank plants.

As stated in previous testimony, the FY 1984 M1 procurement quantity was reduced from 840 to 720 based on affordability--the requirement to maintain a balanced force.

Question: If the plan is 60 per month, why shouldn't the Congress fund 600 vehicles in 1984 and combine them with 120 vehicles pulled forward from the 1983 program to sustain the 60/month rate?

Answer: The Army is not planning to sustain FY83 production at 60 per month. Assuming successful completion of powertrain durability testing in February 1984, production will be increased to an average of 67 tanks per month for thirteen months beginning with the start of the FY 1983 funded delivery period in March 1984. Limiting FY 1984 procurement to 600 vehicles would increase unit costs by approximately $90,000 per vehicle, delays fielding, fails to take advantage of the Army's facilitization investment and would probably cause significant labor lay-offs in Detroit, Lima, Ohio and throughout the vendor, subcontractor plants.

Question: I understand that there are some prior year contract savings that can also be brought forward to help offset the cost of the 1984 program. What are those savings?

Answer: As a result of favorable FY 1983 contract negotiations, $46.4 million can be brought forward to help offset the cost of the 1984 program.

Question: What assurances can be given that the powertrain will meet its required performance goals when installed in both the current M1 and in the heavier (+3 tons) 120mm gun M1 Tank (the M1E1)?

Answer: The engine manufacturer, under Government monitorship, has exerted a considerable effort to accomplish both the necessary design and production quality control improvements to meet its performance goals. These improvements have been under close scrutiny for the past 8 months, and the trends for corrections have been positive. Additionally, the engine has recently completed the durability portion of the laboratory initial production test with no durability failures. Review of field data has also disclosed that the durability of recent production engines is considerably improved. A powertrain durability validation test is planned to commence in August 1983 for validation of these performance goals. The engine should not be impacted to any great extent by the M1E1 program. The transmission/final drive gear ratio on the M1E1 vehicle has been changed in consideration of the weight increase.

Question: In FY 1982, the Army fielded fewer M-1 tanks than planned. Based on the Army's latest projections, slippage appears to be continuing in FY 1983 as compared to the budget. Have deliveries slipped from the contractor, or are more tanks being distributed to POMCUS and war reserve instead of active units?

Answer: In FY82 the Army fielded three less tanks than planned. The reason for this shortfall was slippage in contractor deliveries in late FY82 due to a contractor strike. The contractor strike continued into early 1st Quarter FY83 and added a 25 tank slippage bringing the total shortfall to 28 tanks. This shortfall was overcome in the later part of 1st Qtr FY83; however, a manufacturing and quality problem at AVCO caused a slippage in engine deliveries that forced an engine slave program at the tank plants. At present, there is a shortfall of 27 tanks due to the slave program. The impact of this shortage on fielding is currently being absorbed in the fill of war reserve tanks. The projected get well to make up shortages is late 4th Qtr FY83. No active unit, POMCUS or TRADOC fielding is presently being impacted by this shortfall.

QUESTION: CBO's latest analysis indicates the M-1 tank battalion will be 69 percent more expensive to operate than the M-60 tank battalions. Did the Army anticipate this cost margin when the M-1 was selected for procurement?

ANSWER: The Army considered an estimate of the O&S cost difference between the M1 and the M60 when the M-1 was selected for procurement. The superior combat effectiveness of the M-1 was also considered. The Army continues to have a difference of opinion with the CBO as to the extent of the cost margin.

120mm Ammunition for M-1

Question: You have requested $47.6 million for XM827 and XM865 discarding sabot (SAY-boe) anti-armor rounds but nothing for the high explosive round which makes up 40 percent of the tank basic load. How do you propose to provide this ammo to support the third quarter FY 1986 fielding of the M1E1 tank?

Answer: The US High Explosive Antitank Multipurpose-Tracer (HEAT-MP-T) cartridge, XM830 is scheduled for type classification in August 1984 and will not be available for production until FY 1985. The German equivalent (DM 12A1) does not meet the specific fuzing and arming requirements of the XM830. However, the Army is examining the acceptability of purchasing a limited quantity of the DM 12A1 cartridges as an interim measure to provide both types of service rounds to support the fielding of the M1E1 tank.

Question: To support this fielding, could you fund the purchase of the German equivalent (DM 12A1) round out of the $47.6 million requested for the discarding sabot round? How much is needed?

Answer: Yes. Sufficient German DM 12A1 cartridges to support the fielding of the M1E1 tank could be purchased within the FY 84 budget request for 120mm ammunition. However, this would require a significant reduction in the quantities of Discarding Sabot (XM865) and HEAT (XM831) training ammunition required to support the deployment of the M1E1 tank in the first quarter of FY 1986. Approximately $10.0 million additional funding would be required to procure an adequate quantity of DM 12A1 cartridges.

Question: I also understand that one of the XM827 anti-armor rounds caused a catastrophic breech failure. The investigation team believes the cause was a damaged primer. Isn't $47.6 million production funding request premature until this primer problem is resolved?

Answer: The investigation into the cause of the catastrophic loss of a 120mm cannon tube during testing has been completed and a damaged primer was found to be at fault. A program has already been implemented to strengthen the primer design. As an interim measure the Army plans to procure limited quantities of the stronger German made primer to support execution of the FY 84 buy.

M1 Tank Engine Second Source

Question: Explain how a multiyear procurement of tank engines fits into your second source program?

Answer: Multiyear contracting is proposed for both the second source and the current source during the period covered by the initial split buy of AGT 1500 engines. Use of multiyear contracting allows for most favorable pricing by AVCO and second source bidders. It further allows second source bidders to spread facilitization and other start up costs over the entire engine buy.

Question: What benefits and savings do you expect from this multiyear contract and second sourcing?

Answer: The benefits to be gained from second sourcing include expansion of the mobilization/production base, increased confidence in long-range delivery stability, a broadened base of technical expertise, price competition, reduced effects of possible labor disruption, plant and workforce dispersion, and a reduced constraint on helicopter engine surge production. Establishing a second source will also expand the technical/production base for future turbine engines in other large ground combat vehicles. Although the Army expects savings through second sourcing and multiyear contracts, the amount of the savings cannot be identified until the "best and final" offers are received and evaluated.

Question: What level of tank procurement is needed to support two sources of engine production.

Answer: Army plans for engine second sourcing are based on tank procurement of 60 per month (720 per year). Lesser quantities of tank procurement have not been studied as regards second source since outyear procurements in the FY84 President's Budget are based on annual quantities of at least 720 vehicles per year.

Question: How many potential second source producrers responded to your request?

Answer: Twelve firms responded initially to the 16 December 1982 Commerce Business Daily publication which informed prospective offerers of the proposed second source acquisition. Of these twelve, five firms were determined to meet the necessary qualifying criteria for inclusion on the source list. The governments request for proposal was sent to these five firms. Three of these firms responded with proposals on 2 May 1983.

Question: How do you believe this second source strategy will improve the tank program?

Answer: The tank program will be improved through an expansion of production facilities (engine prime, subcontractors, vendors), increased confidence in delivery stability, improved engine, quality, expansion of the engineering base, potential price competition, and reduced effects of possible labor disruption.

Question: Provide for the record details of any M-1 contract savings realized as a result of the negotiation and definitization of the single contract for fiscal years 1982 and 1983 which might be transferred forward as funding for the FY 1984 production contract.

Answer: In the FY83 program our budget exceeds requirements by $46.4M. We have proposed this excess be used to support an increase in the FY84 tank buy of 120 tanks. In FY82 we were able to contract for the authorized quantity of 665 tanks, at $74.0M below budget, which was used to increase the FY83 procurement by 79 tanks (776 to 855). Additionally, the 855 tanks were contracted at a savings over the budgeted amount by $46.4M. The House Armed Services Committee has proposed that this excess amount be transferred to FY84 to permit an increase in tank production for FY84.

LOGISTICS SUPPORT M1 TANK

QUESTION. With no depth in the supply system and with no war reserves available to sustain the M1 tank in wartime, even limited field operations can reduce stockage levels to dangerously low levels or deplete them entirely. True?

ANSWER. At the time the OSD representative visited CONUS and USAREUR M1 units, the Division's Authorized Stockage List's (ASL) had not been completely filled. Fielding plans called for incremental fill of ASL's as additional battalions were fielded, and not all battalions had been fielded. The status of the fielding effort during that period did create a situation where there were some repair parts that had not yet reached desired stockage depths. The Division's visited by the OSD representative have now received their ASL authorizations; however, some shortages still exist while order/production/repair cycles and depot capability catches up with higher than anticipated demands. Shortage items are intensively managed to insure equal distribution of assets just as they would be in wartime. Both the CONUS and USAREUR M1 units have participated in field/gunnery exercises since the OSD representatives visit and indications are that stockage levels are adequate to sustain the tank at or above the DA goal of 90%. Funding for war reserve Procurement Authorization Army (PAA) items was not received until FY 83.

QUESTION. Stockage levels for the M1 tank have to be augmented in advance of field exercises in order to sustain 1 or 2 battalions in the field for 5 to 10 days at reasonably high mission capable rates. True?

ANSWER. Stockage levels are not normally augmented in advance of field exercises. Prior to major exercises, units routinely review zero balances in the ASL/PLL's (Prescribed Load List) and attempt to bring stocks to authorized levels. Repair parts are normally not pushed to units in excess of their authorized stockage levels. REFORGER 82 is the only case where a relatively small quantity of repair parts were pushed to the field prior to an exercise. This action was taken because the planned number of vehicles participating in the exercise was increased just prior to the start of the exercise (i.e., three battalions rather than one). Based on field reports, only a small number of these additional items were used.

QUESTION. Troubleshooting and maintenance cannot be considered a major factor contributing to excessive amounts of non-mission capable time on M1 tanks. Almost without exception, M1 tanks in the 2d Armored Division and the 3d Infantry Division are returned to operational status as soon as the needed part or component becomes available -- usually the same day. True?

ANSWER. At the time the OSD representative visited M1 units and gathered the information which led to this conclusion, there were some M1 tanks that had experienced excessive non-mission capable (NMC) time; however, troubleshooting and maintenance were factors contributing to this situation. In FY 82, trouble-shooting and maintenance were factors in the 2AD, primarily because the Division had never reached full authorization of mechanics and lost a number of their trained personnel due to rotation. Troubleshooting was not performed as quickly nor were parts installed as fast during the the first three quarters of FY 82 as they are now. The fact that the depth of the ASL had not reached desired levels (as stated in Question 86) also made supply availability a contributor to excessive NMC time during this period. The personnel situation, priority to troubleshooting/maintenance and depth of ASL stockage have all improved over the last six months and the number of tanks that experience excessive NMC time has been significantly reduced.

QUESTION. The bulk of non-mission capable (NMC) time on all M1 tanks is generated by the excessive amount of time needed to fill requisitions for repair parts and components. True?

ANSWER. During the period the OSD representative visited M1 units a number of factors contributed to NMC time of M1 tanks. Requisitioning, troubleshooting and maintenance were all factors, and supply time was a major factor. Currently, the relatively low NMC time experienced by the M1 Fleet is generally split equally between maintenance and supply. Improved parts availability due to the fill of the Divisions' ASL's has contributed to this relatively equal split.

QUESTION. A shortage of direct exchange components is probably the main M1 supply problem. Direct exchange (DX) items are essentially high demand, high cost repairable components whose availability to a large extent control mission capable rates. True?

ANSWER. DX items by their nature have a significant impact on vehicle availability. During the period covered by the OSD representative's trip report, a shortage of DX items was an area of concern. As stated in responses 86 and 88, during this period the depth of ASL's had not reached full authorizations. Additionally, a number of DX components were not being repaired quickly. With the fill of ASL's to authorized levels and the implementation of repair programs for many DX items at Mainz Army Depot (MZAD) and Anniston Army Depot (ANAD) the availability of DX components has improved significantly.

QUESTION. Of all DX items stocked at the corps and division levels, an average of 20% to 25% are at "zero balance" for the M1 tank. This constitutes a serious problem. True?

ANSWER. The direct exchange zero balance rates of 20-25% experienced during the period covered by the OSD representative's trip report did constitute a problem. DX zero balance rates have improved and are currently at 14-16% which is a level that while not completely acceptable, has proven adequate to sustain the fleet readiness rate at over 90%. We continue to work toward improving this zero balance.

QUESTION. The greatest need among all DX components is for spare engines/modules and fire control components. True?

ANSWER. Demand rates which exceeded initial forecasting, a relatively immature depot repair system, and the inability of some vendors to meet short turnarounds on parts procurement contracts during the period covered by the OSD representative's trip report made it necessary to intensively manage these items. While we have not reached a position where we can completely stop intensive efforts for all engine/modules and fire control components, the improved availability of spares and a rapidly maturing depot repair program has improved the situation significantly.

QUESTION. M1 tank availability rates are being degraded more by engine failures than by any other single factor. True?

ANSWER. It is true that during the period covered by the OSD representative trip report engines/modules were the major factor affecting M1 tank availability rates. This was the result of a shortage of spare engine/modules during this period. The primary reason there were a limited number of spare engines/modules available during this period was production and quality problems at the manufacturer during December 1982 and January 1983. These problems forced a decision to divert engines from spares to support tank production, thus creating a temporary shortage of assets to support the field. The production and quality problems have been reduced and engines are now being delivered as spares. The availability of repaired engines from Anniston, Mainz, and contractor depots was also limited during this period. The situation at all three locations has significantly improved, and repaired engines are now being provided to support the field.

QUESTION. How many spare M1 engines/modules have been funded through FY 83 to satisfy peacetime and wartime requirements?

ANSWER. Funded quantities of spare M1 engine/modules through FY 83 are provided below:

	PEACE	WAR
Engine	244	53
Fwd Mod	184	38
Rear Mod	186	20
Reduction Gear Box	151	20
Accessory Gear Box	218	30

QUESTION. What is the peacetime and wartime requirement for spare M1 engines/modules through the FY83 funded delivery period?

ANSWER. Cumulative requirements for spare M1 engines/modules through FY 83 are provided below:

	PEACE	WAR
Engine	244	53
Fwd Mod	184	38
Rear Mod	186	20
Reduction Gear Box	151	20
Accessory Gear Box	218	30

QUESTION. What is the peacetime and wartime requirement for spare M1 engines/modules through the FY84 funded delivery period?

ANSWER. Cumulative requirements for spare M1 engines/modules are provided below. War requirements have been computed based on manual computations.

	PEACE	WAR
Eng	300	40
Fwd Mod	264	25
Rear Mod	199	12
Reduction Gear Box	180	12
Accessory Gear Box	259	18

QUESTION. How many M1 spare engines/modules will have been delivered at the end of the FY82 funded delivery period, and what will be the total requirement at that time?

ANSWER. Spare engine/module deliveries at the end of the FY 82 funded delivery period (Nov 84) are depicted below. All deliveries are for peacetime.

	PROCUREMENT	RQMT
Eng	135	159
Fwd Mod	131	140
Rear Mod	122	111
Reduction Gear Box	119	92
Accessory Gear Box	176	138

The requirement is based on the May 1983 PAA budget submission. Variances between the procurement quantities and requirements result from changes in failure factors and distribution guidance subsequent to FY 82 which were used in developing the latest PAA budget.

QUESTION. Assuming an average unit production cost of $328,000, those funds would buy about 128 engines or 11 per month. True?

ANSWER. The actual FY 82 obligation for spare engine/modules is $37.155M. Further reduction in obligation amount is expected upon contract definitization. This equates to 120 engine equivalents which will be delivered at the rate of 10.4 per month from December 1983 through December 1984. he unit production cost of $.328M is for a production engine, which does not include a hydro-mechanical unit, engine oil pump, or container.

QUESTION. AVCO is currently under contract to deliver spares at the rate of 8 engines/modules per month (6 module sets and two whole engines) with plans to increase spares deliveries to 11 sets per month in 1984. True?

ANSWER. AVCO is currently under contract to deliver specific quantities of engines by month through Dec 83. Engines may be delivered to the tank plants for use in production, or as spare engine/modules for field support. The Government directs the allocation of a month's quantity of engines among these uses as current needs dictate. From Feb thru Jun 83, the quantity allocated to spares has averaged 8.2 engine equivalents per month. Spare deliveries will increase to 10.4 engine equivalents per month in FY 84.

QUESTION. For FY82, what accounts for the difference in spares delivery rate of 11 per month in the budget and 8 per month under contract?

ANSWER. The delivery rate of 11 per month applies to FY 82 funded delivery period, which is December 1983 through November 1984. The actual schedule for this period is 10.4 engine equivalents per month. The delivery rate of 8 per month applies to the FY 81 funded delivery period.

QUESTION. For FY 83, $95.5 million is programmed to procure M1 spare engines/modules. Assuming a unit production cost of $360,000, those funds would buy about 265 engines or 22 per month. True? If not, how many M1 spare engines/modules will be placed on contract for FY83 and at what cost?

ANSWER. The actual FY 83 obligation figure for spare engines/modules is $86.1M. The undefinitized engine unit cost is $.366. Actual procurement quantities for FY 83 are provided below:

	PEACE	WAR
Eng	109	53
Fwd Mod	63	38
Rear Mod	64	20
Reduction Gear Box	32	20
Accessory Gear Box	42	30

QUESTION. For FY 84, $72.6 million is requested to procure M1 spare engines/modules. Assuming a production unit cost of $396,000, those funds would buy 183 engines/modules or 15 per month. What accounts for the decreased spares buy between FY 83-84?

ANSWER. The FY 83 procurement of spare engines/modules included previous years requirements first identified in the Oct 83 Program Objective Memorandum (POM)/Army Materiel Plan (AMP) submission. These changes resulted from density/failure factor increases which raised the required quantities for previous years. Additional funding made available in FY 83 enabled TACOM to "catch-up" to spare engine/module requirements. In addition, war reserve funding provided in FY 83 supported FY 82 and FY 83 requirements.

QUESTION. According to an Army information paper dated May 17,1983, $94.8 million was provided through FY 82 to procure M1 spare engines/modules. Assuming an average unit cost of $300,000, that amount would buy 316 engines/modules. That number far exceeds the number of engines/modules that will be delivered through the FY 82 funded delivery period. What accounts for the difference?

ANSWER. The unit cost of delivered engines has never been less than $.300M. As noted in paragraph 15, approximatley 260 engine equivalents will be delivered through the FY 82 funded delivery period. This translates into an average engine unit cost of $.365M. This average cost reflects the higher prices for engines/modules charged by Chrysler Defense, Inc. for FY 79 spares.

QUESTION. There are two ways to overcome the M1 engine shortfall both at the tank plants and in the field: 1) curtail tank production and hold engine production at planned level; or 2) hold tank production at planned level and increase engine production. Which approach would the Army prefer?

ANSWER. The proposals assume an M1 engine shortfall in the future. Established delivery schedules for the remainder of FY 83 and FY 84 will meet both tank production and spare requirements for new engines. The development of organic overhaul capability at ANAD and MZAD will further alleviate the current shortage of spare engines/modules. ANAD, MZAD, and AVCO have all recently demonstrated their ability to repair the M1 engine, contingent upon the availability of repair parts from AVCO.

QUESTION. If the Committee decided to add funding over-and-above the FY 84 request to procure additional M1 spare engines/modules, given AVCO'S production capacity, what additional quantity of spare engines/modules could be added to the FY84 budget and what would they cost?

ANSWER: No additional funding requirement is anticipated for M1 spare engines/modules in FY 84. Cumulative requirements through FY 84 are fully funded.

QUESTION. Describe the planning assumptions used in computing requirements for M1 spare engines/modules?

ANSWER. The planning assumptions used in computing peacetime requirements for M1 spare engine/modules are:

o Engine failures which cannot be repaired by module replacement are returned to depot for repair; i.e., engines with catastrophic damage, ferrous metal contamination, engines whose failures cannot be diagnosed to two or less modules.

o All module repair is performed at depot.

o Spare requirements are based on in-use and Prepositioned Overseas Materiel Configured to Unit Sets (POMCUS) densities from latest distribution guidance. POMCUS vehicles are used only in determining initial issue quantities.

o DX of engine/modules is assumed through GS level.

o Failure factors are developed from an analysis of latest sample data collection. Increased durability of engines/modules is projected based on implemented/planned RAM-D improvements.

- Wartime budget requirements are computed using the SESAME WARF program. This model determines PAA and Army Stock Fund (ASF) budget requirements but does not provide a by-item breakout. Requirements are negotiated between the Materiel Support Command, DARCOM and USAREUR.

QUESTION. According to an Army information paper dated May 17, 1983, 1258 M1 tank engines had been delivered as of some unspecified date. Of those, 1098 were allocated to the production lines and 160 to spares. Is AVCO meeting the contract delivery schedule for spare engines/modules?

ANSWER. The unspecified date in question was mid-April 1983. Spare engine/module deliveries are on schedule.

LAV-25

QUESTION: What would be the impact on the Army's modernization program if funding for the Light Armored Vehicle were significantly cut back or stopped this year, as proposed by the House Armed Services Committee?

ANSWER: If funding for the LAV-25 were cut back or stopped this year, the total Joint Army/USMC program would effectively be terminated. The contract requires that both the Army and USMC quantities of LAV-25 be called up simultaneously for each production year. Should this not occur, the contract would be voided and the Government would be liable for a cancellation charge of $31.4

million. In addition, if the Army is eliminated from the joint program, the potential for an affordable renegotiated contract based on USMC quantities is unlikely.

The LAV-25 is the near-term solution to fill the urgent requirement of a lightweight, assault-capable, direct fire support weapon system until the Mobile Protected Gun System is fielded in the mid-1990's. If funding is denied, the Army will not be able to satisfy its requirement to provide Rapid Deployment Forces and light divisions with the LAV-25.

QUESTION: When will the operational and organizational concepts for these light armored vehicles be fully developed and tested?
ANSWER: The Army's Training and Doctrine Command (TRADOC) has published the operational and organizational plan for the Mobile Assault Gun Battalion. Currently the 9th Infantry Division has been conducting exercises in order to determine the optimal organization for the Mobile Assault Gun Battalion as well as the optimal operational methods for the employment of this battalion. Results and recommendations from 9th Infantry Division are expected in September 1983.

DIVAD

QUESTION: What is the maximum number of DIVAD guns which can be fielded within available funds?

ANSWER: A total of 618 DIVAD gun systems are programmed for procurement. A production contract was signed in May 1982 with three procurement options. The first two options were exercised fiscal year 82 and fiscal year 83 for 50 and 96 systems, respectively. The third option for 120 systems is scheduled for execution in May 1984. Procurement of the remaining 342 systems is programmed in the POM in fiscal year 85 through fiscal year 87.

QUESTION: If funds were available, could more 40mm DIVAD ammunition be produced in the 1984 program?

ANSWER: Yes. We are short 105,000 proximity fuzed rounds. This ammunition could be produced as a part of the fiscal year 84 program if funds were available (approximately $25.6 million).

QUESTION: What would be the impact of a 50 percent reduction in funding for the DIVAD field maintenance test set?

ANSWER: Field maintenance test sets allow the Army to quickly fix high cost electronic assemblies without evacuation. Reductions in field maintenance test sets buys can only be overcome by additional spares procurement, if fire unit availability and unit readiness is to be maintained. Overall program cost for SGT YORK will increase if field maintenance test sets buys are reduced.

TRI-SERVICE TACTICAL COMMUNICATIONS PROGRAM

QUESTION: In addition to the $93.5 million provided last year, you are requesting $96.8 million in 1984 for the Nodal Control Element. (The Air Force request is $129.9 million in FY 1984.) I understand that at the last program review, a requirement for additional funding surfaced. I also understand that there is a product improvement available to the existing message switch which can save nearly $3 billion. Why shouldn't we direct adoption of this product improvement using the 1983 funds and save the 1984 funds?

ANSWER: The Army is presently reviewing alternatives to determine the most cost effective way of satisfying the nodal control requirement. One alternative is the modification of the AN/TTC-39 circuit switch. The other alternative is a new proposal from Martin Marietta for a reduced-scope Communications Nodal Control Element (CNCE); cost and schedule information for this alternative will not be available to the Army until mid July. This information is needed to enable the Army to complete its analysis and make a decision on which alternative to pursue.

TRI-SERVICE TACTICAL COMMUNICATIONS PROGRAM

QUESTION: When will the Army adopt a firm position on the contractor proposed product improvement?

ANSWER: The Army should have a position not later than early August. The pacing item is the availability of cost and schedule information for the reduced-scope CNCE; this information is to be provided to the Army about mid July.

M9, Armored Combat Earthmover (ACE)

QUESTION: You are requesting $24.4 million for 34 Armored Combat Earth Movers as the first year of a five-year program for 1,318 vehicles for about $945 million. What is the justification for this vehicle?

ANSWER: The Army has an approved requirement for the M9, Armored Combat Earthmover. The M9 is a highly mobile, armored earthmoving vehicle designed to move with the mechanized infantry and armored combat forces. It will accomplish critical combat engineer tasks such as:

preparing hull defilade fighting positions for guns, vehicles, and tanks, and protected positions for other critical battle systems to increase their survivability;
preparing obstacles such as anti-tank ditches;
preparing river crossing sites;
providing the necessary earth-moving support for clearing or bypassing other mobility obstacles.

The commercial bulldozer, our current capability, does not meet the front line earthmoving need. It is only capable of slow speed (5-6 MPH) when travelling on its own power and cannot keep up with the mechanized combat force. On its tractor-trailer transporter, it is essentially road bound. These mobility restrictions severely limit the tactical applicability of the commercial bulldozer system. In addition, the commercial vehicles, not designed to survive on the battlefield and lacking armor, are particularly vulnerable..

QUESTION: I understand that there are armor improvement programs for the M-1 tank. Won't those programs reduce the need for this kind of equipment?

ANSWER: While the improved armor will increase the survivability of the M1, it will not make it invulnerable (no existing combat vehicle is invulnerable), nor will it reduce the need for the M9, ACE. The requirement for the M9 is not related to any single combat vehicle. The M9 is needed to equip combat engineers with a mobile, survivable system that is essential for providing front-line combat support to the fighting force.

QUESTION: Over the next 5 years, is the Army trying to tell the Congress that this $1 billion could not be better spent on filling other critical shortages in areas such as tactical radios and fighting vehicles?

ANSWER: The importance of the need for the M9 in view of total Army requirements was reaffirmed during the process of formulating the FY 84-88 Five Year Defense Plan and the FY 84 Budget. Equipping combat engineers with a survivable front-line earthmoving capability will correct a serious deficiency and significantly increase the effectiveness of the fighting force.

QUESTION: The Committee understands that some initial production vehicles were built during 1982 which incorporated a number of changes to the original 1970's design. What testing information do you have that shows that this vehicle is ready for production?

ANSWER: The improvements made to the M9 entail little or no technical risk. Initial production vehicles have not been delivered to date but verification of the improvements evaluated on prototypes will be accomplished through initial production testing to confirm the performance of the production M9 before the multi-year, competitive quantity procurement.

QUESTION: The GAO recently questioned the cost confidence of your estimates for a five-year program commitment. Why do you think this program can be completed within the requested funds?

ANSWER: The Army has high confidence that the M9 program can be acquired within the requested funding because the quantity multi-year procurement will be attractive to several potential contractors, ensuring the maximum benefit of competition, and M9 program cost estimates have recently been validated.

9mm Handgun

QUESTION: I noted in today's POST the article on the 9mm handgun. Where do you stand on that new 1984 procurement program ($3.9 million for Army; $0.5 million for Navy; $2.0 million for Marines; and $1.0 million for Air Force; TOTAL 1984 = $7.4 million plus $1.2 million for ammunition.

ANSWER: The Army is revising the acquisition plan and coordinated test program to select a standard handgun for the military services. We plan to issue the RFP in September 1983. Proposals are to be submitted and testing will begin in November 1983. If there are no more than six candidate weapons, testing will be completed in July 1984. Source selection and contract award (based upon appropriation of procurement funds) are planned in September 1984.

QUESTION: You are scheduled for a September 30, 1984, contract award. Why can't contract award be slipped a few weeks and make a fiscal 1985 new start and allow a little time for schedule adjustment?

ANSWER: The Army will conduct an expedited, but prudent, selection process which could lead to contract award (based upon appropriation of procurement funds) in September 1984. This award date avoids a break in the acquisition process as prior years funds available for testing and evaluation of this weapon expire on 30 September 1984.

Army Watercraft

QUESTION: You are requesting $56M for 4 landing craft and 1 logistics support vessel. Why are these craft needed this year and what would be the impact of deferring the start of this program one year?

ANSWER: An integral part of strategic mobility is the capability to receive and discharge shipping once it arrives in an objective area. The Army has been assigned the mission by section 3062, Title 10, of the U. S. Code and implementing regulations to possess the capability not only to discharge deploying forces and sustaining shipping but also to be prepared for port and logistics over the shore (LOTS) operations incident to joint operations.

To meet this requirement the Army has pursued an aggressive program to modernize and develop its watercraft capability to support world-wide Army port and LOTS operations. These craft are an integral part of the overall watercraft LOTS program. The program is based on an initial CENTCOM analysis that an estimated 21,000 short tons per day of equipment, supplies and containers must be discharged and moved over the shore. Preliminary DOD sealift study results have validated the Army LOTS requirement.

The four Landing Craft, Utility (LCU) and one Logistics Support Vessel (LSV) are the first year of a multi-year procurement program designed to replace overage, technologically outmoded, and logistically unsupportable watercraft. Each of these programs is designed to contribute to the Army's total LOTS capability to meet world-wide contingency requirements. The purchase description for the new LCU requires roll-on/roll-off capability with a payload of 250 short tons versus 150 short tons for the current LCU. The LSV candidate is required to be a roll-on/roll-off vessel, able to transport 900-2000 short tons of cargo depending on the beach gradient, and transport 11,000 barrels of bulk liquid. Requirements for both vessels are for self-delivery capability. Current objective is to meet the Army LOTS requirement by the end of FY 88. As programed, production lead time places delivery of the first LCU in December, 1984 and the first LSV in June, 1985. A one year program delay jeopardizes the Army's capability to meet the identified contingency requirements within the current objective.

Funding of the Army watercraft program is essential if the Army is to increase its capability to meet DOD reception and discharge requirements. Delay of these programs will further restrict the Army's capability to perform its LOTS mission. The Army watercraft program is necessary if the Army is to retain its credibility as a viable deterrent and warfighting force.

COMBAT CONSTRUCTION EQUIPMENT

Question. You are requesting $281.4 million for construction equipment this year of which $172.3 million is for multiyear contracts. However, only $117 million is required to execute the contracts without exercising any options. Why should we fund any of the 1984 contract options when the contracts will be bought next year anyway?

Answer. The Combat Construction Equipment (CCE) funds were restructured utilizing the excellent prices received from competition on these items to buy the badly needed Combat Equipment sooner and not have to pay any increase of price due to Economic Price Adjustments (EPA) in subsequent years. This was accomplished by using a feature of the contracts which allow calling forward up to two years basic contract and option quantities. The net result of the excellent prices received and buying the program out earlier is a $350.6M reduction in FY 85 through FY 87 funding requirements. These funds were applied against other high priority items in FY 85, FY 86, and FY 87 while getting the equipment to the troops sooner. If funds are not made available in FY 84 to fund the option quantities, the standardization goal of reducing the number of makes and models will be degraded since the funds which would have been used to fund these quantities have been reallocated. Also the increased quantities support the upgrading of the aging fleet sooner. The funds that remain in the FY 84 President's Budget and programmed in FY 85 are the minimum required to complete the programs.

RESERVE COMPONENT MODERNIZATION

QUESTION: A recent DOD report notes that although the Army is supplying $1 billion in equipment to the Guard and Reserve in FY 84, it starts from such a deficit position that the $1 billion is relatively insignificant. For your earliest deploying reserve units, what are your most critical modernization needs?

ANSWER: The $1 billion is divided between the Army National Guard ($961 million) and the Army Reserve ($176 million). The relative significance of the equipment procured with this money cannot be viewed in isolation as it does not include any displaced equipment that the Reserve Components will receive as a result of Active Army force modernization.

The most critical modernization needs for Army National Guard early deploying units are listed below:

Automatic Telephone Central and Switchboard
Telephone Terminal AN/TCC 65, AN/TC 72, & AN/TCC 73.
Semitrailer, Tank, Fuel 5,000 gallon.
Radio Repeater and Radio Terminal Sets AN/TRC 174
  and AN/TRC 173.
Radio Test Sets ARM-34 and AN/GRM 114A.
Truck Tactical 1 1/4 ton.
Night Vision Sights AN/TAS 5 and AN/PVS 4.
Night Vision Goggles AN/PVS 5.
Radio Repeater Set AN/TRC 138.
Teletypewriter Set AN/UGC-74A.
Decentralized Automated Service Support System Computers.
Improved Message Facilities.
Howitzer, Medium, 155 SP.
Air Defense equipment.
Aircraft and related equipment
Medical equipment.

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Answer: The $1 billion is divided between the Guard ($961 million) and the Reserve ($176 million). The relative significance of the equipment procured with this money cannot be viewed in isolation as it does not include any displaced equipment that the Reserve Components will receive as a result of Active Army Force Modernization.

The Army Reserve critical needs involve mission essential combat service support (CSS) equipment to support and sustain the Total Army. Examples of the types of equipment required are trucks, automated data processing equipment, forklifts, radios, test equipment and various maintenance shop sets.

QUESTION: What can be done to cause dedicated management to improve the rate of modernization of the early deploying Reserve and Guard units over later deploying combat units of the active force.

ANSWER: The Army has undertaken a number of initiatives to improve the rate of modernization in Reserve Components (RC). To handle the influx of new systems, both the Army Reserve and the Army National Guard have recently established force modernization offices to intensively manage modernization in their respective organizations.

There is an ever increasing emphasis in the Army today on what we call the Total Army which includes active and reserve organizations. Equipment is programed, purchased, and distributed for the Total Army and not separate components. Distribution is made to all components based on unit mission requirements, in a "first to fight is first equipped" policy. In keeping with this policy, RC roundout units are assigned the same priority as their active component (AC) to insure equipment compatibility. Consequently, many RC units have a higher claim on new equipment than many AC units and they are receiving equipment at a much more accelerated rate than ever before.

The 2-252d Armor Battalion, North Carolina National Guard and the 48th Infantry Brigade, Georgia National Guard are examples of our "first to fight, first equipped" policy. The 2-252d Armor Battalion is a roundout unit for the 2d Armor Division of Fort Hood and is in the process of being fully equipped with the Abrams M1 tank. The 48th Infantry Brigade is a roundout brigade for the 24th Mechanized Infantry Division at Fort Stewart and has already received the modernized M60A3 tank as well as the improved TOW vehicles (ITVs). These units and all other reserve component units with high deployment priorities will continue to receive new materiel systems before many active component units which have a later deployment.

ADVANCED TECHNOLOGY DEVELOPMENT

QUESTION: The Army's Advanced Technology Development budget request, containing over 30 separate programs, has increased from $260.7 million to $419.5 million in FY 1984, up more than 50%. Why is such a large increase needed in FY 1984?

ANSWER: Through increased funding in this budget category the Army plans to better capitalize on promising technological developments in order to improve our capability to meet the quality and quantity threat posed by our potential adversaries. Advanced technology developments not only affect developing systems, but are used to upgrade existing systems through component replacement. This budget category is a key part of our program to more rapidly move promising technologies out of the technology base, and to improve the potential for significant improvements to existing equipment, current developmental efforts, and future development programs.

QUESTION: Doesn't this mean that in 4-5 years the Army will have a large number of programs entering engineering development?

ANSWER: No. There is no direct relationship between the number of projects in the Advanced Technology Development program and those in system oriented engineering development. Advanced Technology Development programs are a means to prove promising technologies and to demonstrate their potential applications, primarily at the component and subcomponent level. Those components and subcomponents which prove out the maturity of the technology and have a high potential for increasing our weapons systems capabilities may be incorporated into product improvements for existing systems, preplanned improvements to current developmental systems, or into future engineering development programs.

155mm Gun Improvements

Question: The Army has asked for $64 million in FY1984 to start a product improvement of the 155mm Self-Propelled Howitzer. This seems to be a large budget request, considering this is the first year of a product improvement program. Just what improvements are to be made?

Answer: Proposed M109 modifications include: A new cannon with the same ballistic characteristics as the new M198 towed 155mm Howitzer providing compatibility with all current and projected 155mm Howitzer ammunition; a new loading system capable of providing an increase in the rate of fire; increased ammunition storage; a new automotive system (engine, transmission & modified suspension); an improved communication system, ballistic computer system and self-locating and navigation system such that highly dispersed single gun operations are possible while maintaining the capability of centralized control of massed fires; a hybrid NBC protection system (ventilated face piece, micro-cooling and positive overpressure) to provide improved NBC survivability; improved ballistic protection; the addition of built-in test equipment (BITE) and modular replacement for identified failures; and corresponding improvements in the ammunition resupply vehicle to make it compatible with the improved howitzer.

Question: Why couldn't the program start on a lower level of funding in FY1984? What could be accomplished with $30 or $40 million?

Answer: The FY84 request provides funding to continue development of modifications started in FY83 at a level that allows the Army to field the improved howitzer by the second quarter of FY1990. These modifications are necessary to maintain the M109 as a viable indirect fire support system for the Heavy Division/Brigade out to 2000. Reduction of funding for FY84 to a level of $30 or $40 million will result in a delay in fielding of at least one or one and one-half years. This reduction may also preclude the Army from competitively contracting with more than one contractor for full-up prototype systems.

RPV

QUESTION: This Committee supported the Army's RPV program last year, and requested a report by June 30, 1983, on the Army's acquisition and employment plans for RPVs. Staff has been notified the Army cannot comply with this direction. Why not?

ANSWER: The Army has recently approved significant variations to the operational concept which would without increasing air vehicles generate sorties for additional uses of the RPV system (in addition to the current field artillery mission) to include other missions such as intelligence, electronic warfare, and radio relay; and possibly result in a less expensive program through reduction of equipment. Additional time is needed to allow the Army to complete analysis on the impact of the new operational concept and revise cost estimates.

The Army will request from the Committee a delay in report submission to 30 September 1983.

QUESTION: The RPV program is far into full scale engineering development, but you cannot give us up-to-date Army deployment plans and projected out-year funding.

What does this tell us about the Army's commitment to the RPV program?

ANSWER: The Army is fully committed to the RPV program. It is a high priority program and is fully funded for R&D and procurement. As previously discussed, the Army has changed the operational concept to expand RPV utility. This has changed Army deployment plans and may change out-year funding. Army will request a delay in report submission from the Committee so that the most up to date information can be provided.

QUESTION: You are asking for $138.1 million for the RPV program, an increase of $27.9 million over last year's projections for the program.

Why shouldn't we cut you back to last year's FY 1984 projection, if you can't come up with a solid program that can be deployed rapidly?

ANSWER: RPV is a solid program in the Army. The Army plans to field one soldier-operated system in August 1983 and two soldier-operated systems in 1985. The perceived softness in the program is due to the fact that the Army is changing the RPV operational concept, and the analysis of the impact of that change is not complete.

A reduction to last year's FY 84 projection will delay development of a night capability for RPV by one year, and disrupts the RPV system production schedule in that FLIR mission payloads cannot be easily integrated into the production process. Air vehicle production will have to be delayed while waiting for FLIR.

LHX HELICOPTER

The Army is just starting an advanced development program for a new multi-purpose helicopter (attack, scout, utility), called the LHX. The Army is asking for $2 million to start LHX in FY 84.

QUESTION. Charts given to the subcommittee relating to the LHX program show that you want to increase the number of helicopters in the inventory, and not just replace older aircraft. Why?

ANSWER. The LHX is being developed and procured to replace the Army's aging 1950's and 60's technology UH-1, AH-1, and OH-58 helicopter fleets. The projected increase in the quantities of helicopters in the inventory is necessary to fill existing requirements shortfalls. Some out-year growth in helicopter requirements are anticipated in response to the planned addition of Reserve Component divisions to the force structure, and the addition of attack helicopter battalions to Corps Aviation Brigades.

QUESTION: How many LHX helicopters will you need? Won't this be another multi-billion dollar program?

ANSWER: The Army will replace its obsolete fleet of 7000 UH-1, AH-1, OH-58 and OH-6 helicopters with approximately 4900 LHX aircraft. The development and acquisition of the LHX will extend beyond the year 2000 and will be a multi-billion dollar program.

QUESTION: We're already being asked to commit billions for the JVX. How can we afford to develop so many vertical lift systems?

ANSWER: The Army has not programed resources for the JVX. In the course of developing a balanced modernization plan for the 1990s that would be affordable within the Army's projected resources, the JVX was not supported. LHX, the Army's only vertical lift development program, is the keystone for future aviation modernization. It will replace an old and tactically obsolescing fleet of UH-1, AH-1, OH-58 and OH-6 helicopters with an operationally effective and logistically supportable weapons system. Because of its critical importance to the Army, LHX is considered an affordable program and has been funded within the POM and extended planning annex period.

QUESTION: Do we have any idea as to prospective costs?

ANSWER: RDTE cost estimates for the LHX are projected at $2.4 billion in constant fiscal year 83 dollars and LHX unit costs are estimated to be $4-$6 million per aircraft in constant fiscal year 83 dollars. LHX procurement will extend beyond the extended planning annex period.

We understand the Army plans on maintaining competition throughout engineering development for the scout/attack version of LHX, and that there will be a fly-off.

QUESTION: Won't prototyping add significantly to the R&D costs for the program?

ANSWER: Since LHX will be a totally new design of vertical lift aircraft, prototyping is an integral part of the RDTE program, and will add to the R&D costs.

ANTI-TACTICAL MISSILE

QUESTION: You are requesting $33.3 million for the anti-tactical missile in fiscal year 1984, on top of last year's $10 million appropriation. Are you contemplating the anti-tactical missile as an anti-ballistic missile-type defense for Pershing II?

ANSWER: No, there are no plans to use the anti-tactical missile system as an anti-ballistic missile-type defense for Pershing II.

QUESTION: Last year, this Committee zeroed the anti-tactical missile, citing lack of firm deployment plans and inventory objectives for the program. This year, in answer to written questions, you again state the Army cannot yet develop an anti-tactical missile inventory or cost estimate.

Since this program is only in the conceptual phase, why can't you absorb a reduction?

ANSWER: The anti-tactical missile program is a new start in fiscal year 83 with efforts initiated to define concepts and formulate requirements to counter the tactical missile threat. Although the program is only in the conceptual phase, the fiscal year 84 request for $33.3 million is needed to continue those research, development, test, and evaluation efforts begun in fiscal year 83. Special Study Group results are expected in fiscal year 84 and will provide greater definition to the program. A reduction in fiscal year 84 funding will delay program definition and, therefore, development of deployment plans and inventory objectives.

QUESTION: Do you consider this a high Army research and development priority?

ANSWER: Yes, the anti-tactical missile effort is considered a high priority for Army research and development.

QUESTIONS SUBMITTED BY SENATOR ANDREWS

Army Modernization Programs

QUESTION: The Army plans to develop a second source for the production of the AGT 1500 gas turbine engine for the M1 tank. What is the anticipated monthly production rate of the gas turbine; why does the Army feel that the production of this engine will be cost effective and will meet the reliability and durability requirements?

ANSWER: The Army is exploring the feasibility of developing an engine second source producer for mobilization base expansion. If development of a second source is feasible, the anticipated production rate would be 60/month plus spares at a rate of approximately 25 engines and engine equivalents per month during the three year period, FY86 through FY88 funded delivery period. Second source bidders would compete for 30 per month (50% of the vehicle production requirement). A second source would be allowed to compete for all spare engine requirements following successful completion of initial production tests. Additionally, the competitive procurement atmosphere and bid data now available indicate that a second source can also be cost-effective vis-a-vis our latest AVCO engine cost projections. Second source bidders all met rigorous special qualification factors to insure that bidders had the capacity, capability, and track record necessary to ensure competence for this production effort. Their bids include accomplishment of a major preproduction engineering and test effort, all of which is directed towards ensuring that a second source will meet reliability and durability requirements.

M1 SUPPLY STOCKPILE

QUESTION. A recent article in a Defense Publication states that "The Army's supply of spare engines and other components stockpiled in Europe for the M1 battle tank is so dangerously low that the Army could not sustain even four battalions of 58 tanks each at a wartime operating tempo for very long--certainly not for 30-60 days." Can you respond to this?

ANSWER. Although stockage levels for M1 engines and modules have not yet reached full authorized levels in USAREUR, we disagree that the situation is such that the tank could not be sustained at a wartime operating tempo. The intensity of the support effort during wartime is significantly greater than in peacetime. In addition to using available stocks of engines and modules, war reserve vehicles would help sustain unit readiness. Another important factor would be the cannibalization of components from combat damaged vehicles.

The M1 engine, because of its modular construction, has a significant support advantage. An unserviceable engine, thru the exchange of modules, could in fact be used to repair as many as three other engines if the need existed.

Fielding in USAREUR has now been in process for approximately 18 months. This has been a period of growth in the support structure and steady improvements have been noted. The capability to repair

M1 engines and other components at Mainz Depot has improved significantly, internal USAREUR supply procedures have been developed and are in place to support the tank, and soldier experience in how to isolate problems and intiate repairs grows daily. In short, the system is maturing. Although some work-arounds and intensive management would be necessary, the fleet is supportable in wartime. The M1 tanks would add a substantial combat advantage, even at less than 100% operational readiness.

CBO OBSERVATIONS; READINESS MEASURES

QUESTION: The Congressional Budget Office states that the Department of Defense has "no aggregate measure of readiness that indicate how far readiness may have fallen in the 1970's, nor quantifiable goals that suggest how much it needs to be satisfied." What is the Army's response to these observation of the CBO?

ANSWER: The observations made by the Congressional Budget Office are partially correct. Volume 1 of the Department of Defense Force Readiness Report for Fiscal Year 1984 was submitted to Congress in February 1983. It stated: "Currently, the DOD possesses no single quantitative measure of 'force readiness', although quantifications of subordinate components of force readiness do exist." Essentially, force readiness must be inferred from these subordinate components.

The degree to which readiness declined during the 1970's can be inferred from declines in some of these quantifiable subordinate components of force readiness. Records exist that measure personnel and equipment readiness in terms of quantity and quality relative to wartime requirements. Generally, these same readiness measures can be applied to the over-all goals of the Army.

To a certain extent, we do have quantifiable tools that enable us to measure and manage the readiness of Army units. These are the authorized levels of organization, which are assigned to every unit in the Army, and the unit status ratings ("C" ratings), which are indicators of the day-to-day readiness of individual units. Although we would prefer to have all units at the highest authorized levels of organization, the reality of resourse constraints makes it necessary for us to assign lower levels to some units. Generally, authorized levels are assigned on a "first to fight" principle, with higher levels assigned to forward deployed and early deploying units. Other units are presently organized at lower levels, but our goal, which we believe is realistically attainable with continued Congressional support, is to have the entire divisional force at the high authorizations (levels 1 or 2) by FY 89, and for non-divisional combat units to be at these levels by FY 99.

As important as these quantifiable indicators are, however, they do not paint a complete picture of how Army readiness has been improved recently and will continue to improve in the future. An additional factor, and of more immediate interest to this Committee, is the impact of our modernization program on force readiness. This is an area where we clearly must go beyond C-ratings to assess the readiness of our units. For example, an armor battalion equipped with the new M-1 tank might report identical C-ratings as a battalion equipped with the M60A3 tank, even though the M-1 battalion would be far more capable and therefore more ready to fight, survive and win on the modern battlefield. In many ways, modernization is readiness, and the fact that its impact is difficult to quantify does not lessen its significance.

OUTLAY SAVINGS

QUESTION: A higher proportion of outlay savings can be obtained in the FY 84 budget by cutting the Army readiness accounts. The FY 84 Defense budget calls for an increase of 38,000 personnel over the FY 83 level for the overall active-duty force. What would the Army recommend on freezing the active-duty force at its current level or cutting back on readiness items such as off-the-shelf purchases, spare parts, fuel and depot maintenance?

ANSWER: The FY 84 defense budget as submitted to Congress represents the minimum essential requirements needed to support the Army's contribution to the National Defense. The Army's portion of the requested increase was 2,600 personnel over the FY 83 level. As submitted, the Army budget is a balance between mission requirements and fiscal constraints. Any reduction in the purchase of readiness items such as off-the-shelf purchases, spare parts, fuel or depot maintenance; or any attempt to reduce or freeze end strength will adversely affect the Army's ability to accomplish its mission responsibilities, and to the extent that it does so, jeopardize the national defense.

QUESTIONS SUBMITTED BY SENATOR D'AMATO

TOW II

QUESTION: The House Armed Services Committee, in House Report No. 98-107, stated that it deleted $61.6 million from the Army's budget request for the TOW II program. The deleted funds were intended to provide for TOW II retrofit and to facilitize the contractor to be able to meet a surge requirement to produce 3,500 TOW II systems per month. The rationale given for the reduction in funding was Army testimony that no plan existed to retrofit TOW IIs and that, since the contractor was already facilitized to produce as many as 2,500 TOW IIs per month and production was not scheduled to ever exceed 1,800 TOW IIs per month, the additional facilitization funds were not justified. What are the Army's plans regarding TOW II retrofit?

ANSWER: There are no plans for a TOW II retrofit program. The program of $189.2 million is for the procurement of new TOW II missiles, launchers, and associated ground equipment. No retrofit of existing basic TOW was contemplated. The last retrofit of basic TOW missiles was funded in the fiscal year 1982 program.

Part of the House Armed Services Committee cut ($33.4 million) was based on a perception that this amount was to be used to retrofit basic TOW missiles. Since basic TOW retrofit has not been a consideration for two years, it appears that this perception leads from a mislabeling by the Army of requirements on the P-12 exhibit for missile procurements. The TOW II retrofit kit ($33.4 million) referred to in the P-12 system/item breakdown consists of the thermal beacon, reload flight motor and activator and shutter assembly--three components which make TOW II a TOW II. They are not used to "convert or retrofit" a basic TOW to TOW II.

QUESTION: What is the Army's current stockpile objective for TOW II's?

ANSWER: Defense Guidance FY84-88 requires the Army to achieve ammunition sustainability through [deleted] [deleted]. For TOW 2 this equates to [deleted] missiles.

QUESTION: When will the Army reach this objective, under current and planned rates of procurement?

ANSWER: The Army will reach its objective for TOW missiles with the fiscal year 1989 procurement. Fiscal year 1989 deliveries are scheduled to begin April 1990 and end April 1991.

QUESTION: Under the standard conventional war in Europe scenarios, what is the Army's projected usage rate for TOW II's?

ANSWER: Based upon the Wartime Requirements, Programing, fiscal year 1988 Europe (P88) analysis, the TOW 2 usage rates for U.S. forces in NATO will be: (Deleted.)

QUESTION: How soon after the contractor received notice that a surge to full production capacity was required could the contractor be expected to attain that level of production?

ANSWER: With a funded and implemented surge program the contractor can achieve full surge production in six months after go-ahead. In the absence of surge capability, if the contractor was directed to surge immediately, it would take twenty-two (22) months to achieve full surge production capability.

QUESTION: What are the Army's current ammunition and missile stockage priorities?

ANSWER: The Army stockage of ammunition and missiles is based upon sustaining the forward deployed and high priority deployable units for the period established in Defense Guidance. Where fiscal constraints preclude meeting the guidance, every attempt is made to provide balanced stocks of conventional munitions (to include selected missiles such as anti-tank guided missiles and MLRS rockets) i.e., roughly the same level of sustainability for all munitions.

QUESTION: Where does TOW II rank in these war reserve stockage priorities?

ANSWER: Although there is no war reserve stockage priority list, the TOW 2 missile procurement has a very high Army priority.

HELLFIRE TEST CONCLUSIONS

QUESTION: The Army has conducted tests involving mounting Laser Hellfire missiles on vehicles and aircraft other than the AH-64 Apache attack helicopter. Has the Army drawn any conclusions from these tests?

ANSWER: The Army has conducted tests in which the HELLFIRE missile was fired from the AH-1 COBRA and in a ground launched mode from a commercial utility cargo vehicle (CUCV).

Additionally, the Army has demonstrated that the HELLFIRE missile is capable of being fired from the UH-60 BLACK HAWK helicopter. Numerous Army studies and analyses have indicated that the AH-1 COBRA and HELLFIRE combination is not a cost effective option. The HELLFIRE launches from the CUCV were conducted as surrogates for precision guided anti-tank missiles by the Army's High Technology Test Bed. At this time, the Army has concluded that the AH-64 is the only requirement for the HELLFIRE missile.

HELLFIRE LAUNCH ALTERNATIVES

QUESTION: Is the Army considering developing Laser HELLFIRE launching capabilities for vehicles other than the AH-64?

ANSWER: The Army currently has no plans to equip vehicles other than the AH-64 with HELLFIRE missiles.

RESERVE COMMAND POST VEHICLE REQUIREMENTS

QUESTION: The Army requested $130 million to procure 652 M577A2 command post vehicles. The House Armed Services Committee reduced this request by $80 million and 402 vehicles on the grounds that if this procurement were to go ahead, the Army would be ". . . well over its total inventory objective for active components." What are the unfilled requirements for this vehicle in the Reserve Components?

ANSWER: Requirements for the M577 family of command post carriers are based on the generic vehicle which consists of the M577, M577A1 and M577A2 styles. Procurement is only being made on the newer M577A2 vehicle. Reserve Component unit requirements to support the FY 84 budget and the asset position as of 31 March 1983 are shown below:

	Unit Wartime Requirement	On Hand	Shortage
Reserve Components	[Deleted]	[Deleted]	[Deleted]

The remainder of the force is also short of vehicles as follows:

	Wartime Requirement	On Hand	Shortage
Active Units	[Deleted]	[Deleted]	[Deleted]
War Reserve, POMCUS, Maintenance Float, and Depot Stocks	[Deleted]	[Deleted]	[Deleted]

[Deleted].

M577A2 REPLACEMENT PLAN

QUESTION: Is there any plan to develop a replacement for the M577A2 in the near future?

ANSWER: There are no current plans to develop a replacement vehicle for the M577A2. There are a number of product improvements that have been developed and tested on other members of the M113 family of vehicles, or for which technology is in hand, that could improve performance and survivability of the M577A2.

Army Modernization Program

QUESTION: Does the Army feel it should meet the needs of the reserve components for these vehicle?

ANSWER: Yes

ISSUE OF COMMAND POST VEHICLES TO THE RESERVE COMPONENTS

QUESTION: Does the Army plan to assign any of the vehicles procured under this authorization, assuming the total of 652 vehicles is ultimately approved, to the Reserve Components?

ANSWER: Providing Congress approves procurement of 652 M577A2 command post carriers, the Army plans to issue 42 vehicles to the Army National Guard and 2 vehicles to the Army Reserve.

M-16A2 Rifle Procurement

QUESTION: When does the Army intend to begin procuring the improved M16A2 rifle?

ANSWER: The Army currently has no plans to procure the improved M16A2, rifle. Any future Army requirement for M16 rifles will be met by procurement of the M16A2.

Handgun Inventory Disposal

QUESTION. How does the Army plan to dispose of its .45 caliber and .38 caliber pistols which will become excess as the new 9mm pistol comes into service?

ANSWER. The 9mm pistol will be introduced into the inventory over a period of approximately ten years. As the .45 caliber and .38 caliber pistols are replaced on a one-to-one basis, they will be turned into the depot. It is anticipated that, as pistols become excess, they will be offered for Foreign Military Sales and to State and Federal Law Enforcement and other Federal Agencies. There is no plan for sale of these handguns to the public.

Viper Substitute Testing

Question. What is the status of the Army's program to test alternate light anti-tank systems as possible substitutes to Viper?

Answer. Testing began on schedule on 1 Apr 83. Tests for five of seven light systems have been completed. Systems completing testing are Viper (US), Viper Variant (US), M72A3 (US), M72-750 (Norway), and ARMBRUST (Germany). Although undergoing testing, ARMBRUST was eliminated from competition for failing to meet the entry deadline.

Two tests (beyond armor and warhead penetration) are the only tests completed for the AT-4 (Sweden) and LAW 80 (United Kingdom).

About one fourth of the total test effort remains to be completed. Testing will be completed by 31 July 83. The GAO has been granted access to all testing.

Helmet/Vest Issue Program

Question. What is the status of the Army's program to issue the new Kevlar helmets and protective vests to combat units?

Answer. The Army has issued 22,500 helmets and 26,000 vests to Rapid Deployment Force units, specifically the XVIII Airborne Corps, for which Congress provided funds in the FY 80 DOD Appropriation Bill. These items were the result of the production test conducted by the Defense Personnel Support Center. During FY 84, the Army will begin issue of additional helmets currently under procurement. These will be issued in priority determined by Headquarters, Department of the Army. The Army plans to purchase 97,000 vests for war reserves during FY 84. Vests will be available for troop issue as funding becomes available.

M551 SHERIDAN VEHICLES

QUESTION: In light of the difficulties facing the Light Armored Vehicle program, has the Army considered refurbishing its inventory of M551 Sheridan vehicles and equipping them with new turrets, guns, and fire control systems?

ANSWER: No, we have not considered refurbishing the M551 as a Light Armored Vehicle (LAV) substitute. The US Army and USMC are totally committed to the LAV-25 program. The M551 was considered as a LAV candidate prior to awarding the LAV-25 contract, as directed by OSD and Congress. It was rejected for numerous reasons but primarily because of low operational readiness rates, and it did not meet weight and airlift requirements.

M551 SHERIDAN ARMORED RECONNAISSANCE VEHICLE INVENTORY

QUESTION: How many M551's does the Army have in its inventory and where are they located?

ANSWER: M551 Sheridan armored reconnaissance vehicles are distributed as shown below:

LOCATION	QUANTITY
82nd Airborne Division, Fort Bragg, NC	57
Army National Guard, AR	12 *
National Training Center, Fort Irwin, CA	330
Used as test bed vehicles at various locations in the US	26
Depot Storage, Anniston, AL	1126
TOTAL	1551

* Currently being exchanged for M60 tanks and about to be transferred to Depot Storage.

M551 RELIABILITY

QUESTION: Historically, the M551 had serious difficulties with the combination of its main gun and fire control system. What was its automotive reliability, maintainability, and durability like?

ANSWER: Reliability, availability, and maintainability (RAM) data is only available for the entire M551 vehicle. The established US Army M551 operational readiness rate standard is 78 per cent. This rate was not attained until FY76 and was achieved through intensive management actions and large investments in repair parts inventory.

M551 CREW SURVIVABILITY

QUESTION: We have had combat experience with M551. How would you compare its crew protection, mobility, and general survivability with the LAV's qualities in those same areas?

ANSWER: Both the LAV-25 and M551 offer approximately the same level of overall crew protection from small arms fire and artillery fragments. The turret of the M551 offers slightly greater protection. The LAV-25 offers greater survivability because of its HALON automatic fire extinguisher system. The M551 combustible cartridge ammunition is hazardous in case of fire or penetration. Both have comparable mobility when considering the LAV-25 is a wheeled vehicle and the M551 is a tracked vehicle.

PRODUCT IMPROVEMENT PROGRAM-M551

QUESTION: In your opinion, would a product improvement program for the automotive systems of the M551 be effective if a decision were to be made to place a modern turret, gun, and fire control system on the vehicle?

ANSWER: The question of costs and time to improve a 15- to 20-year-old chassis has to be considered, as well as extensive and expensive modifications required to accommodate a different turret, gun, and fire control system. Modifying the old system, would not be cost effective. The question of future logistics supportability and costs must also be considered. The transmission for the M551 is out of production and tooling is not available, requiring cannibalization of transmissions from the fleet to maintain and support operational forces. Additionally, the M551, modified as suggested, would not meet the weight requirement for CH-53E helicopter transportability.

LAV, M551 SPECIFICATION COMPARISON

QUESTION: Please compare, on a point-by-point basis, the specifications of the LAV in its basic form with the specifications of the M551 Sheridan as it was last procured, and discuss the Sheridan's ability to meet the LAV mission requirements for the turreted version.

ANSWER: A comparison of the major LAV and M551 specifications is as follows:

PARAMETER	REQUIRED	LAV	M551
Height	106 inches	106	102
Width	106 inches	98	110
Weight	29,000 lbs.	28,250	35,000
Acceleration	20 mph in 10 seconds	20 mph in 6 sec	20 mph in 9 sec
Max Speed	50	62	42
Max Water Speed	3 mph	6	3
Range	400 miles	415	310
Transportability			
- CH-53E	1	Yes	No
- C-130B	1	Yes	Yes
- C-141B	2	Yes	Yes
- C-5A	4	Yes	Yes
Ballistic Protection	7.62mm	Yes	Yes
Reliability	1250MMBMF	1,718	215

Changes to the turret would have no impact on the above parameters.

M551 MODIFICATION

QUESTION: What modifications to the turret and the vehicle would be required to fit an M-2 Bradley turret to an M551 Sheridan?

ANSWER: Extensive vehicle modifications would be required. These include development of an adapter to accommodate the turret ring size and basket height differences and changes to the electrical and fire control systems. An M551 Sheridan so modified could not be transported by C-141 and C-130 aircraft.

COST ESTIMATE, M551 UPGRADE

QUESTION: If the LAV program should be terminated, a refurbished and upgraded M551 Sheridan equipped with the M-2 Bradley turret or perhaps the new 75mm or 90mm guns now under development could perform at least some of the missions the LAV was designed to perform. Please make a rough cost estimate of such an alternative program.

ANSWER: Approximate costs for equipping an M551 with an M-2 Bradley turret, in FY82 constant dollars, are:

- non recurring costs: $23M
- unit procurement cost: $535,000
- time to first deliveries: 3-4 years

The 75mm gun development program is a USMC initiative. Application to an M551 Sheridan has not been developed. A 90mm gun program is not under consideration. Therefore, developing a cost estimate at this time is not feasible. A program to complete development of the 75mm gun and its application to the M551 could be a 6- to 8-year effort.

SUBCOMMITTEE RECESS

Senator **Rudman**. I want to thank you all, particularly General Kenyon.

You are first-rate witnesses. I appreciate your candor this morning, for being as well prepared as you were for this hearing. You can go back and tell the Chief of Staff you got a lot of questions on details. You can also tell Jim Ambrose that you had an entire morning with the committee, and we did not ask one single question about Viper. [Laughter.]

The subcommittee will be in recess.

[Whereupon, at 11:55 a.m., Tuesday, June 21, the subcommittee was recessed to reconvene at the call of the Chair.]

DEPARTMENT OF DEFENSE APPROPRIATIONS FOR FISCAL YEAR 1984

THURSDAY, JULY 21, 1983

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, D.C.

The subcommittee met at 10:05 a.m., in room SD–192, Dirksen Senate Office Building, Hon. Ted Stevens (chairman) presiding.

Present: Senators Stevens and Inouye.

DEPARTMENT OF DEFENSE

ASSISTANT SECRETARY OF DEFENSE

MANPOWER, RESERVE AFFAIRS AND LOGISTICS

STATEMENT OF HON. LAWRENCE J. KORB, ASSISTANT SECRETARY OF DEFENSE (MANPOWER, RESERVE AFFAIRS AND LOGISTICS)

ACCOMPANIED BY:

LT. GEN. DEAN TICE (USA), DEPUTY ASSISTANT SECRETARY OF DEFENSE FOR MILITARY PERSONNEL AND FORCE MANAGEMENT, MRA&L, OSD

DEFENSE MANPOWER REQUIREMENTS

MANPOWER INCREASES

Senator **STEVENS**, I just walked in the building and was at another hearing, but I notice the rollcall vote indicator is on. In any case, the subject of today's hearing is defense manpower requirements.

The Department of Defense fiscal year 1984 budget request includes manpower increases for all three components, Active, Reserve, and civilian. The Senate and House Armed Services Committees have sharply curtailed the requests for military activity and civilian manpower increases. In this regard, it is now necessary for this committee to examine carefully how the Department of Defense will meet its force requirements with fewer people.

U.S. TROOP INCREASES IN EUROPE

One area of concern is proposed U.S. troop increases in Europe. Last year this committee placed a ceiling on European strength, both to get control of these constant increases overseas and to signal to our allies that they must shoulder a greater portion of the European defense costs.

Now, in fiscal year 1984, the Department of Defense already wants to raise this ceiling by 7,000 people.

FUTURE MANPOWER REQUIREMENTS

The second issue is the relationship of future manpower requirements to current procurement and force structure plans. With rising manpower costs and limited resources, the Congress must consider the effect of current weapons and ship purchases on future manpower requirements.

MANPOWER AFFORDABILITY

The third issue is manpower affordability. The current administration has made great improvements in military retention and the quality of recruits. This committee must insure that these gains are made with the most efficient use of the resources approved by Congress. To date, we have seen no strong indication that the Pentagon is making a serious effort to bring down personnel costs.

Now, Dr. Korb, I do not mean to be offensive in that opening statement, but your prepared statement will be printed in the record in full. I would like to have you highlight your remarks and to tell you that we may be interrupted here today because of the defense bill that is on the floor. But I consider this to be extremely important for us as we now have an indication from the House that we will mark up our bill right after the August recess.

So we must give some directions to our committee staff as to how to proceed, and I am extremely disturbed at the problems that this committee will face in meeting our budgetary limitations, if we are to find ways to absorb what I consider to be a substantial increase in manpower and to absorb the manpower costs. Specifically, the committee has been directed to absorb the pay increases in the budget. They are unbudgeted pay increases, but we must absorb them in our budget limitations. Let me put it that way. Mr. Dyer makes a good correction.

Perhaps you may want to summarize your statement and to read it because I have looked at it, and I think it would be important for those who are here to understand the points that you are trying to make.

SUCCESS OF ALL-VOLUNTEER FORCE

Dr. **Korb.** Thank you, Mr. Chairman. It is a privilege to appear before you once again. Last year, as you may remember, I reported that America's All-Volunteer Force had experienced a year of unparalleled achievement. I am pleased to be able to report that, largely due to the President's leadership and Congress' continued support, this year has been an even better one for us. All of the details of that are summarized in my prepared statement.

As you know, readiness and sustainability continue to be this administration's top priority, and we are asking for significant but needed increases in funds for procurement in order to continue to provide our forces, both Active and Selected Reserve, with the best equipment available. To insure that this equipment can be maintained and operated properly, we are also asking for substantial increases in our operations and maintenance account. This will allow us to make continued progress and improvement in training and maintenance, and thereby, continue to increase the readiness of our forces.

However, the key to insuring continued momentum, especially with new, improved weapons systems entering the Force, is to insure continued progress in the readiness of our people. I believe that the Department of Defense uses an efficient, effective mix of active duty, Selected Reserve, and civilian personnel to achieve this goal.

PERSONNEL READINESS

We use four aggregate indicators to monitor and assess personnel readiness in our military forces: strength, or the number of people we have; experience, or the grade and experience mix of our people; skills, or occupational qualifications which match the job requirement; and stability, or the number of people that remain in their units over a period of time.

The personnel readiness of the force has improved measurably since this administration took office. For example, the end strengths of each of the components have increased during the past 2 years and will, with your support, continue to do so during the coming year. The increase in military strength has been made posible by extremely successful recruiting and retention efforts. The modest 2-percent growth in both Active and Reserve components which we are proposing is tied for the most part to new systems deployment. A reduction in fiscal year 1984 and strength from what we have requested will reduce personnel readiness, cause some problems in terms of slowed promotions and faster turnaround of sea and overseas duty, and will directly impact on our ability to support properly new systems such as MX, B-1, GLCM, and our program to achieve a larger Navy.

Our policy has been, and will continue to be, to maintain as small an Active Force as national security policy and military strategy will permit. Active military people are employed only in those jobs which require forward deployment, immediate readiness for combat operations or combat support, and the training and rotation base that supports the force.

INCREASED ROLE OF RESERVE FORCES

In accordance with this policy, we have been increasing substantially the role of our Reserve Forces during the past few years and are requesting increased average strength for 1984 for each Reserve component. the cumulative increase since fiscal year 1980 for all Reserve components will be 160,000 people, representing almost a 20-percent growth. In the same period of time, the Active Forces will have grown by 115,000, which is less than a 5-percent increase. Such an emphasis on Reserve Forces is unprecedented and has been made possible because my office in the Department is responsible for total manpower policy. Therefore, the Department views with alarm the recent Senate action to add a separate Assistant Secretary of Defense for Reserve Affairs and make my office responsible only for active duty and civilian personnel.

The Department is looking very carefully at the mix of Active and Reserve units in the total force. On July 1, I forwarded to the full Senate Appropriations Committee a report on this issue which presented information on the current mix of forces and the rationale used in deciding where a unit should be placed. My office continues to review this issue and intends to send the Congress additional reports over the next year as that review and study continues. The Department is actively looking at the conversion of units from Active to Reserve in this summer's program review, and will make such transfers where mission capability and readiness can be preserved and funds saved.

EXPERIENCE LEVEL OF FORCES

The experience level of our Forces, the second component of personnel readiness, has improved significantly during the past year because retention in both Active and Reserve components has increased. For example, the inventory of the Active enlisted career force increased by 46,000 from fiscal year 1981 to 1982. Reenlistment rates are up; early attrition rates are down; and the services are meeting or exceeding their enlisted accession goals.

MOS GAINS

The third measure of personnel readiness, the matching of occupations needed with trained personnel at the unit level, shows gains particularly in four skill areas which in the past have plagued us: pilots, combat arms personnel, electronic repairmen, and electrical and mechanical equipment repairmen. Along with increases in the number of personnel, we are now attracting and retaining a higher quality person in these critical skills. For example, 96 percent of Army combat arms noncommissioned officers now have high school diplomas.

Finally, reduced attrition rates and improved retention have comtributed to improving the personnel stability in our active units. We have also initiated a program in the Selected Reserve components to combat early attrition of reservists, which I am certain will serve to reduce attrition and improve stability for the Reserve components.

By these measures, personnel readiness of our Armed Forces has improved significantly. Better compensation, better public climate for military service, better training and equipment, better leadership and morale have all contributed to these improvements. To a large extent they have been possible by strong congressional support. I believe that with the continued support of this committee, we can maintain our achievements in quality and strengthen our defense posture.

ENLISTMENT AND REENLISTMENT BONUSES

As you are well aware, the enlistment and reenlistment bonuses are key incentives in the successes we are enjoying in our recruiting and retention programs. Now that Congress has extended the bonus authorities until September 1984, we ask that you approve the funds at the levels we have requested so that the services can pursue the initiatives they have outlined for these programs.

SUPPORT FOR STRENGTH INCREASES

We request your support for our strength increases. The resources requested for recruiting, retention, training, working and living conditions, and daily operations are absolutely necessary to maintain our people at high levels of readiness.

The strength increases requested are modest, indeed, when measured against the requirements of our strategy—defensive and deterrent in nature. Therefore, we must rely on our allies to make considerable contributions and play an integral role in carrying out our strategy. Two programs which we have developed which complement our force structure and manpower requirements and which are an integral part of our strategy are POMCUS and wartime host nation support. POMCUS, the prepositioning of materiel in division sets, enables us to meet our 10-division D-Day commitment to NATO. In exchange for this commitment, our allies have agreed to provide increased wartime support for U.S. Forces. The wartime host nation support is Germany's commitment to that increased effort. Wartime host nation support provides critically needed wartime logistic support for U.S. Forces at a cost much less than the cost of providing that support ourselves. Without this support, the combat capability of our deployed and follow-on forces would be significantly degraded.

We are again requesting funds for operations, maintenance, and transportation of equipment for POMCUS sets 5 and 6 and for funds to pay the U.S. share of investment costs associated with the wartime host nation support program. The absence of this support cound be catastrophic if our forces are required to fight.

We are encouraged by the Senate's approval of the fiscal year 1983 supplemental appropriation for these two programs.

The Senate Armed Services Committee has recommended that the fiscal year 1983 European troop strength ceiling be extended through fiscal year 1984 with provision for Presidential waiver. The JCS has recently completed a study of European manpower levels, and the Secretary of Defense has approved a reduction of 3,800 spaces from our planned fiscal year 1984 levels. Even with this self-imposed decrease, we still cannot reach the proposed ceiling without impairing our ability to support long-term programs and commitments. We continue to maintain that our functional capabilities should not be encumbered by constrained manpower resources. This objection notwithstanding, we will fully comply with the law.

CIVILIAN END STRENGTHS

The Department's requirements for civilian end strength reflect our basic policy to minimize requirements for military personnel by employing DOD civilians or private contractors to perform jobs which are not needed for deployment or military rotation, or where their use will not adversely impact on combat readiness or fighting capability. A skilled work force of civilian manpower is critical if we are to achieve our readiness objectives. Civilian personnel in the military departments and Defense Agencies are the primary resource in meeting our support requirements, especially base operating support, support of supply and distribution activities, and depot level maintenance of ships, aircraft, and ordnance.

Because we believe that it is essential to find more efficient ways of conducting business, we are actively pursuing a productivity improvement strategy to insure that resources are used in the most efficient manner. This strategy employs three interrelated approaches: operational improvements through efficiency reviews, commercial activity cost studies, and intra-or interservice support agreements; funding productivity enhancing capital investments; and work force motivation efforts. We need your support and endorsement of our efforts in order to achieve these efficiency objectives.

BUDGET REQUEST

The fiscal year 1984 budget contains requests for $178 million in productivity enhancing capital investment funds. This request will fund investments with projected lifetime savings of over $1.5 billion, and internal rate of return of almost 80 percent. From a personnel standpoint, the investments will free up an equivalent of over 4,500 military and civilian spaces to be realined to other mission areas.

Last year the Congress reduced our funding request for these programs by $28 million, or 21 percent. As a result, we expect to pay an additional $130 million more over the next 5 years than we would have had to spend to accomplish the same workload with more efficient equipment and processes. We request your support of our productivity investment fund program in order to maintain our commitment to innovation and productivity improvements.

PROGRAM STATE REPORT

With your permission, I would like to submit our most recent program status report for the record.

[The information follows:]

PRODUCTIVITY ENHANCING CAPITAL INVESTMENTS

PROGRAM STATUS REPORT

PREPARED BY
THE DEFENSE PRODUCTIVITY PROGRAM OFFICE
FOR THE
ASSISTANT SECRETARY OF DEFENSE
FOR
MANPOWER, RESERVE AFFAIRS AND LOGISTICS

EXECUTIVE SUMMARY

The Department of Defense (DoD) is again pleased to report, in accordance with House Report 95-1398, dated July 27, 1978, on the status of the DoD Productivity Enhancing Capital Investment (PECI) program. The intent of this report is to provide a clearer understanding of the objectives and results of DoD's program and to convey the relationship between PECI and the Department's efforts to improve efficiency and economy within its operations.

The program was initiated in 1977 through funds provided that year for "fast payback" capital investment programs. Since that time the program has evolved and matured into a broad strategy with one underlying objective -- to provide a mechanism to finance productivity improvements. The program complements the recent capitalization of industrial fund activities provided in the Fiscal Year (FY) 1983 Defense Appropriation and various other capital investment programs focused on specific areas of concern such as our Energy Conservation efforts.

Results of the program have been substantial. As now constituted, the PECI program encompasses three funding strategies -- Productivity Enhancing Incentive Funds (PEIFs) restricted to small dollar investments which return costs within two years; Productivity Investment Funds (PIFs) for larger long term investments with a payback in four years or less; and Component Sponsored Investments (CSIs) tailored to the productivity goals and plans of the individual Military Service or Defense Agency.

- Collectively, these programs have resulted in investments of over $366 million during the period 1977 through 1982. Cost savings of over $2.4 billion will have occurred from these investments by 1988.

- PEIF or fast payback projects typically return costs within their first year of operation. Returns of $15 to $1 are not unusual from these investments.

- First funded in 1981, PIF investments are just becoming fully operational at this time due to acquisition leadtimes for the more sophisticated equipment. Savings to investment ratios predicted for these larger projects have increased from $6 for each $1 invested in the 1981 projects to over $14 to $1 for those projects included in the FY 1984 Defense Budget requests.

- The reductions of $26 million in our FY 1983 PECI requests will result in the loss of over $130 million in unrecovered savings during the next five years - monies and personnel that could have been reapplied to compensate for resource shortfalls and for improving Defense readiness.

- Currently, only about one in five PECI opportunities are funded due to established levels of funding. As a result, a mounting backlog of opportunities is accrued each year. This will be compounded during the next few years by an aggressive efficiency review program directed to all DoD activities which is expected to surface significantly greater areas of potential labor-capital substitution.

Although the tangible benefits of the PECI program are significant, it also produces the side effect of communicating the Secretary's desire for productivity consciousness to all levels. Currently the DoD Productivity Program encompasses a wide range of operational improvement and work force motivation actions, all of which are integrated with and co-dependent upon the PECI initiatives. Without the continued support of the Congress and DoD management, the program cannot effectively continue to improve efficiency or provide incentives for productivity.

SECTION I

THE DOD PECI PROGRAM - PAST AND PRESENT

Background:

The Department of Defense (DoD) has promoted Productivity Enhancing Capital Investment (PECI) as a means of productivity improvement since 1975. Initial OSD sponsored funding for PECIs was provided by Congress with the Defense Appropriation for Fiscal Year (FY) 1977. This first funding, which amounted to $19.6 million dollars, was for acquisition of off-the-shelf fast payback equipment. This was predicated on the earlier success of the Department of the Army with a 1973-1976 prototype program for Government-owned Contractor-operated activities.

What is a PECI?

DoD program guidance defines PECIs as any investment in facilities, equipment or technology which materially contributes to improved efficiency - a positive change in the relationship between our outputs (products or services) and our inputs (personnel, dollars or material/energy). For DoD's purposes, PECIs are limited to investments which return costs within four years.

Why a special PECI program?

Defense managers have long recognized that modern technology could improve their operations and reduce costs over the long term. But productivity improving investments have been underfunded due to budget prioritization practices which focus on immediate needs. As a result, many opportunities to achieve economies were never realized.

The Formal Program:

The DoD PECI Program was formally instituted as a part of the DoD Productivity Program in 1975. Policies relating to opportunistic capital investments were incorporated in DoD Directive 5010.31, "Productivity Measurement, Enhancement and Evaluation - Policies and Responsibilities" in 1975 and reaffirmed in its 1979 update. Specific procedures and guidance for PECI are provided in DoD Instruction 5010.36, "Productivity Enhancing Capital Investment." These include requirements for program responsibilities, uniform project documentation, consistent project prioritization for funding, post investment accountability, and audit.

PECI is only one of several elements in DoD's overall Productivity Program. PECI is inherently integrated with the other productivity enhancement efforts and with measurement and evaluation of operational productivity. Although the results of single investments seldom impact to any significant degree upon the overall productivity of a major function such as Department-level procurement or supply, they do collectively contribute to the change in input-output ratios and, thus to overall DoD productivity trends.

Currently, the PECI program uses three primary funding strategies. The overall objective of these strategies is to provide ample opportunity for every DoD manager to propose and receive financing for productivity improvement projects which take advantage of technology, processes, or equipment to improve operational efficiency. The first and oldest of PECI strategies, Productivity Enhancing Incentive Funds (PEIFs) is targeted to small dollar fast payback items - projects that return costs within two years. A second major strategy, Productivity Investment Funds (PIFs), was initiated in FY 1981. PIF uses traditional planning, programming, and budgeting processes to finance larger more costly investments. Both of these are complemented by Component Sponsored Investments (CSIs) which are more tailored to individual Service and Agency needs. Criteria and areas of application for each of the funds are shown in Figure 1. Some perspective on the relative scope and benefits from these differing strategies can be seen in Table A which is a summary for FY 1982 PECIs.

Over the past six years (1977-1982) investments made through these programs total $366 million. During the life of these investments, savings of over $2.4 billion are anticipated. In addition to the cost reductions in a wide range of operations and functions, these investments will result in freeing up over 11,000 personnel spaces to be reapplied to existing backlogs or to existing mission requirements. Figure 2 displays, on a yearly basis, our 1977 through budgeted 1983 investment and benefit streams from these investments over the 1977 through 1988 timeframe.

The program has improved with experience. Prioritization and selection procedures for projects have been refined. As a result improvements in savings to investment ratios have been dramatic. This trend in improved cost benefit relationships and payback periods for PIF projects selected for financing from FY 1981 through the FY 1984 Defense Budget is highlighted below.

Productivity Investment Fund Projects

	FY 1981	FY 1982	FY 1983	FY 1984
Savings to Investment ($ Saved to $ Invested) Ratio	$2 to 1	$6 to 1	$11 to 1	$14 to 1
Internal Rate of Return	31%	38%	51%	79%
Payback Period	3.4 years	3.2 years	1.9 years	1.6 years

THE DOD PRODUCTIVITY ENHANCING CAPITAL INVESTMENT PROGRAM

- AN OVERVIEW -

INVESTMENT EFFORT	STARTED IN FY	PROJECT COST LIMITS	PAYBACK PERIOD	INVESTMENT TARGET
Productivity Enhancing Incentive Funds (PEIFs)	1977	< $100,000	2 Years	Small Dollar Labor/Cost Saving Equip. In all DoD Activities
Productivity Investment Funds (PIFs)	1981	> $100,000	4 Years	Major equipment/ facilities selected on basis of Rates of Return - All DoD Activities
Component-Sponsored Investment Funds	1981	Established by Each Svc/Agency	Variable	Mission oriented Invest-Projects Complement OSD Funds

PRODUCTIVITY ENHANCING CAPITAL INVESTMENT SUMMARY

FISCAL YEAR 1982 PROGRAMS

(Dollars in Millions)

PERSONNEL	NO. OF PROJECTS	INVESTMENT COSTS	ANNUAL $ SAVINGS	LIFETIME $ SAVINGS	MANPOWER SAVINGS
Productivity Investment Funds (PIFs)	49	$ 91.4	$ 80.8	$527.1	2950
Productivity Enhancing Incentive Funds (PEIFs)	272	8.8	9.4	87.2	572
Component Sponsored Investments (CSIs)	17	17.4	8.9	84.9	167
Industrial Fund Fast Payback (IFFP)*	463	40.4	21.2	173.5	337
TOTALS	801	$158.0	$120.3	$872.7	4026

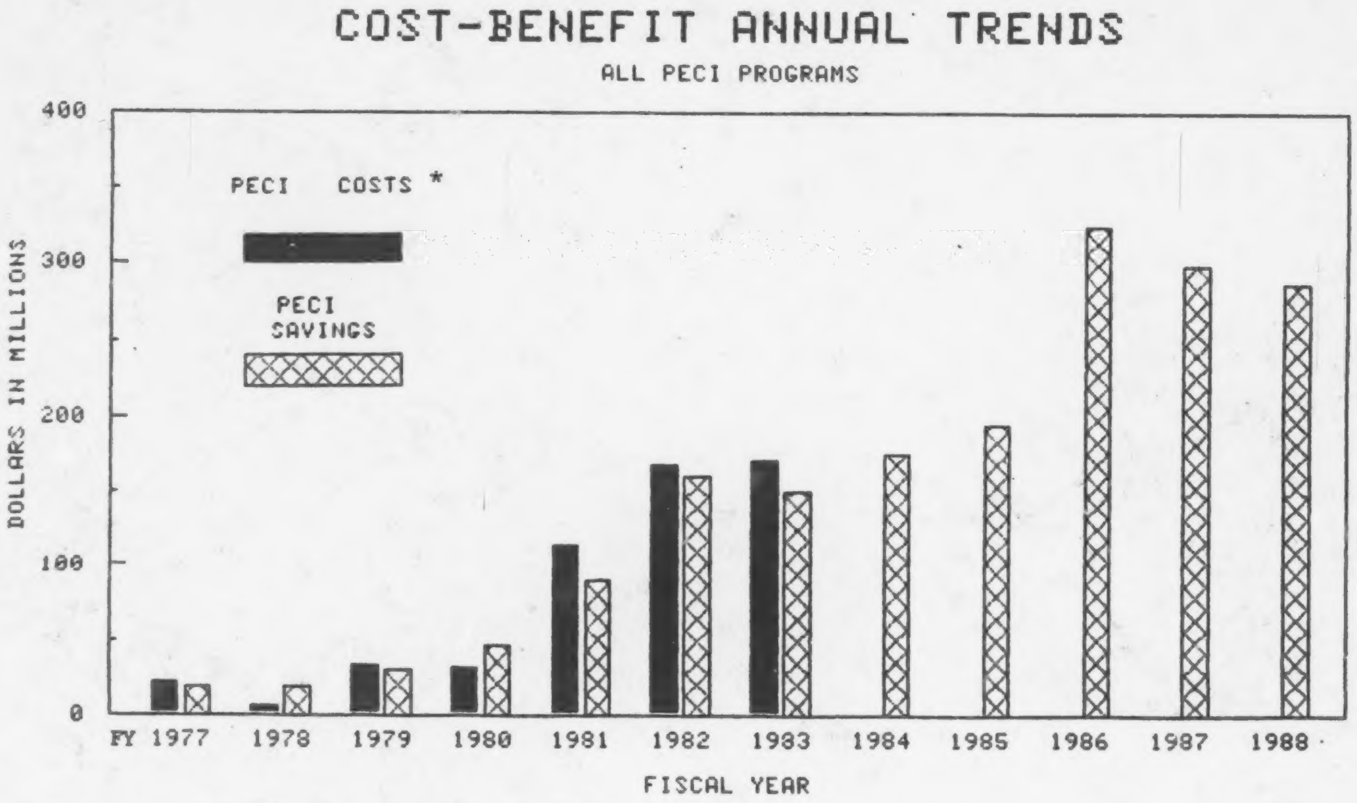
*IFFP was discontinued after this fiscal year. The above figures do not contain information for the Navy program which were not available.

The following statistics relate to the different programs:

Average project cost -
PIF - $ 1.8 million
PEIF - $32.2 thousand
CSI - $ 1.0 million
IFFP - $87.3 thousand

Average payback period (after project is operational) -
PIF - 14 months
PEIF - 11 months
CSI - 23 months
IFFP - 23 months

TABLE A



* Funding from FY 1977 through FY 1983

FIGURE 2

Current Need For PECI:

Since the inception of the program in 1977, the need for increased attention to this type of investment has become more evident. Although we have, to date, requested and received appropriations for $366 million in PECIs, our backlog of valid cost-effective opportunities continues to grow. For example, in our most recent exercise to select the high return projects for 1984, we were able to finance only $1.00 out of every $6.00 of known opportunities.

Starting this fiscal year, 1983, Defense capitalized industrially funded (IF) activities. Under this capitalization, which has Congressional sanction, all equipment and systems needed by these activities are acquired from operating capital. Costs are recovered through depreciation charges included in unit costs for products and services. Concurrent with the capitalization, these activities were excluded from using the PECI funding programs. Even with the advent of the capitalization policy the level of unfunded PECIs has continued to grow. The two programs are complementary even though only a part of the industrial fund investments will be productivity related. Both programs contribute to DoD's overall objective of holding down the unit costs for direct and tactical support functions.

Beginning with FY 1983, OSD has directed all activities to conduct efficiency reviews of their existing operations. These reviews require definition of mission requirements in terms of performance standards. They also involve analysis and improvement of existing work methods and processes. Past experience has shown that significant cost reductions will result from these reviews. Improvements in methods and processes typically include acquiring more efficient equipment -- items which reduce labor intensity of operations, improve quality and eliminate rework. These actions will generate greater needs for PECI financing and increase the backlog of unfinanced investments.

PECI in the FY 1984 Defense Budget:

The FY 1984 Budget contains a total of $177.7 million dollars for PECI programs. Of this, $34.6 million is for fast payback or PEIF investments, $129.1 million is for specific PIF projects and $14 million is for CSIs. These investments offer a potential lifetime savings of over $1.5 billion dollars. These projects also are expected to release over 4,500 military and civilian manpower spaces which can be reallocated to improving direct mission and logistic support productivity.

Program Acceptability:

Over the past seven years DoD's PECI Program has achieved overall acceptance by managers at all levels. Through an aggressive promotion program by the Services, proposals are now received from all command levels and from both Conus and overseas activities. DoD-wide PIF projects have also been sponsored by the OSD staff offices. Budget and appropriation trends for PECI by program and in total over the past FYs 1977 through 1984 are shown in Figure 3. Given the modest baseline of $19.3 million in 1977, the program has gradually expanded to its present level of $178 million. Unfortunately this expansion reflects no growth, in terms of FY 1977 dollars. In fact, the figures indicate a declining percentage of the annual Defense Budget for PECIs over this period in any single funding strategy.

A $26 million reduction in DoD's request for $197 million for PECI programs in FY 1983 was recommended by the Senate Appropriations Committee. Since the recommendation was not addressed by the Joint Conference Committee it was sustained in the Continuing Resolution for FY

1983. The reduction apparently was based on a perceived pattern of too rapid growth in the program. The growth was, in fact, the culmination of the evolving PECI strategies into an aggressive and positive program consolidation for the first time. The FY 1983 reduction will create a loss of savings opportunities of over $130 million over the next five years. It has also created the perception that Congress does not support productivity initiatives which has had a negative effect upon internal support of management innovation. DoD has taken it upon itself to do a better job of increasing Congressional awareness of the growing need for productivity investments and of communicating the essentiality of this small but highly leveraged program.

Program Improvements:

During the past two years various actions have been taken to improve the credibility of the program. The Military Departments have issued procedures which establish uniform project documentation and post-investment reporting. The Office of the Secretary of Defense has provided increased technical support to Service and Agency program managers through the Defense Productivity Program Office (DPPO). Project selection procedures now incorporate management objectives and priorities. Actions to improve economic analysis processes have been taken and additional training for project initiators provided.

Over the past several years each Service has conducted training seminars and symposiums on PECI which focus upon improving the evaluation and analysis processes and highlighting the need for project accountability. These actions were taken to improve the quality of project proposals and, consequently, our investments. Equally as important, they are designed to improve program credibility. Although PECI concepts have been validated, DoD believes that program acceptance will be gained only by displaying credible results.

PRODUCTIVITY ENHANCING CAPITAL INVESTMENT FUNDING TRENDS — FISCAL YEARS 1977-1984

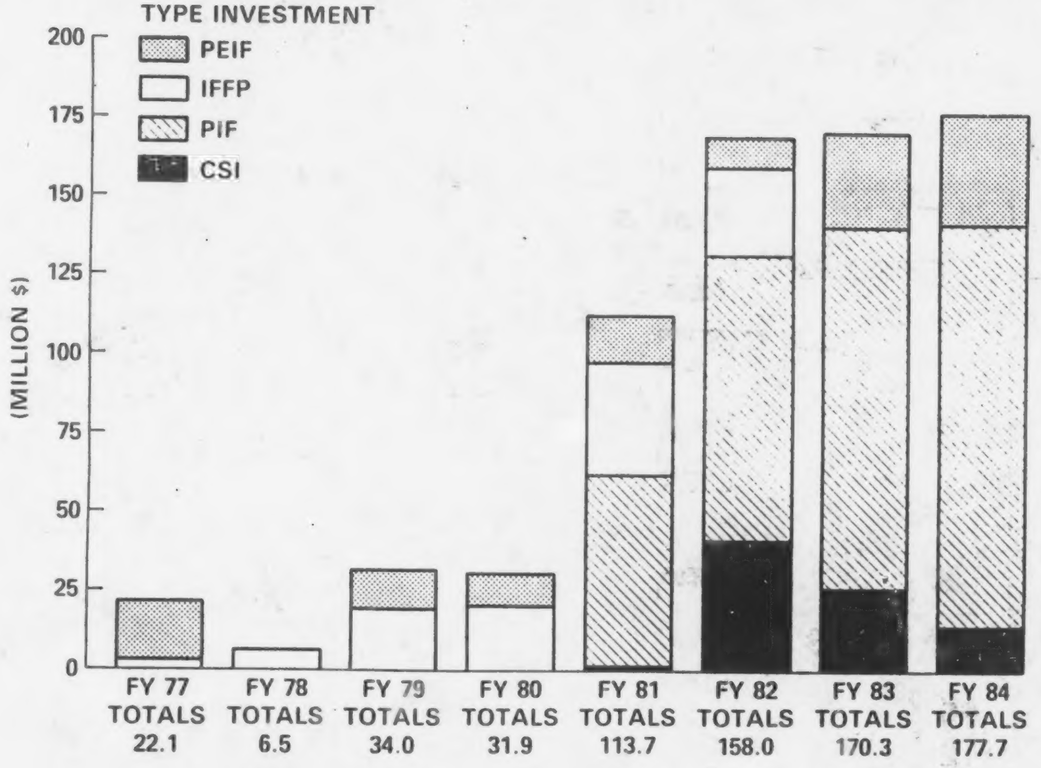
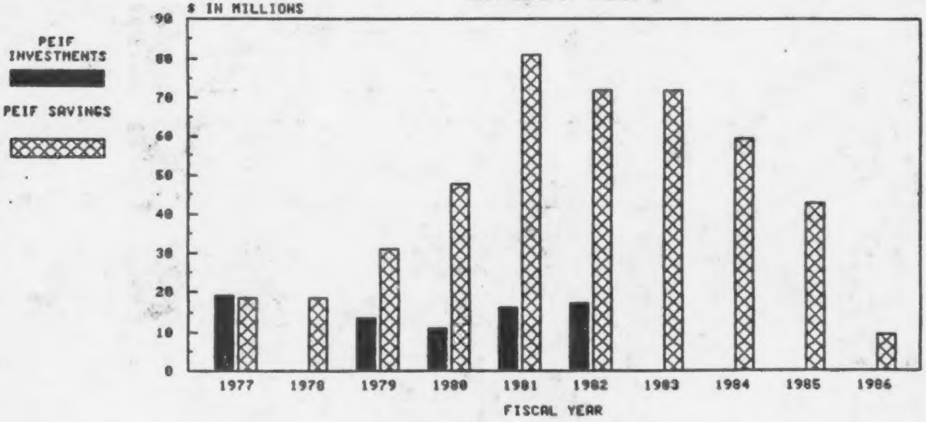


FIGURE 3.



PRODUCTIVITY ENHANCING INCENTIVE FUNDS

COST-BENEFIT TRENDS

FIGURE 4

PRODUCTIVITY ENHANCING INCENTIVE FUNDS (PEIF)

REPORT ON FISCAL YEAR 1982 INVESTMENTS
BY MILITARY SERVICE OR DEFENSE AGENCY

(Dollars in $000)

SERVICE OR AGENCY	NO. OF PROJECTS	INVESTMENT COSTS	SAVINGS		MANPOWER SAVINGS	
			ANNUAL	LIFETIME	(AUTH)	(EQUIV)
Army	116	$3,300	$4,123	$41,239	80	368
Navy	0	---	---	---		
Air Force	154	5,400	5,200	45,300	140	
DLA	2	133	70	700	___	4
DoD TOTAL	272	$8,833	$9,393	$87,239	220	372

FIGURE 5

SECTION II

SPECIFIC PROGRAM ACCOMPLISHMENTS

General:

As stated in Section I, the current PECI program is made up of three unique funding strategies -- PEIFs; PIFs; and CSIs. Each will be discussed separately in this chapter.

Productivity Enhancing Incentive Funds (PEIFs):

PEIF monies established in Service and Agency budget requests provide ready financing for small dollar fast payback investments. Funding levels represent an individual Service or Agency's best estimate of the amount these types of investments will cost during the budget year. Generally, these estimates have been conservative. Funds are depleted by mid-year and many worthwhile projects remain unfunded each year. All Services started PEIF programs in FY 1977.

DoD is very proud of the results of PEIF. Although payback limits are set at two years, projects typically return costs well within the first year. The average project costs $32,000 and projects include such items as word processors, electronic calculators and equipment, brush cutters, medical test equipment, and shrink wrap packaging equipment. The typical return on a PEIF project averages about $15.00 for each $1.00 invested.

Figure 4 displays the Service/Agency funding trends for PEIF and their projected annual savings from 1977 through 1986. The FY 1984 Defense Budget includes a request for $34.6 million for PEIF.

PEIF is essentially a grassroots program. Project proposals are nearly always the result of first line innovative actions. Figure 5 shows the individual Service/Agency program statistics for this fiscal year. The program provides an excellent incentive for productivity initiatives since its policy permits project developers to reapply the savings to valid nonresourced requirements. Initial proposals must identify how savings will be reused and post investment follow-ups show when and where the reapplication was made.

Audits and reviews have been performed on PEIF projects by all of the participating Services. All Services also have procedures that include semi-annual follow-up of project operation. These audits and reviews indicate that a high percentage of projects produce results at a greater rate than predicted. Problems continue to exist, however, in obtaining documented results in some areas. Actions are being taken to improve this situation in all Services. Additional audits will be performed and results reported during the coming years.

Several unusual investments have been made through PEIF in FY 1982. One project financed under the Army PEIF or "Quick Return on Investment Program (QRIP)" was for phosphatizing equipment to clean and preserve weapons at an Army training activity. Part of the activity's responsibilities required cleaning and preserving a number of restricted or classified weapons which, due to security, could not be sent off the activity. With this investment, personnel now preserve the weapons using the phosphatizing equipment. As a result, a large backlog is being reduced, more weapons are available for training exercises, and annual savings of over $90,000 are expected. The cost of the investment was $2,484. Several of the more typical projects financed through PEIF are shown in Appendix 1.

Productivity Investment Funds (PIFs):

The success of our early fast payback efforts also produced the realization that investment cost limits were severely constraining the size and type of investments. This prompted a decision to establish complementary strategy to finance major investments. Beginning in FY 81, the Department established, within the Five Year Defense Program, a level of $105 million which would be used only to finance major productivity improvements.

A total of $64.3 million was included in the FY 1981 Defense Appropriation since the one month time frame allowed for project proposals limited the number of good projects which could be validated and approved. The program has been sustained in FYs 1982, 1983, and is included in the FY 1984 budget. With each year, program improvements have produced higher quality projects and increasing levels of return on investment.

PIF policies and procedures incorporate conditions to ensure that: (1) only cost-beneficial projects are selected for funding; (2) no investment requirements or policies are circumvented; (3) monies are used only for accepted proposals or approved investments; and (4) full accountability for these projects is maintained. These policies also provide the incentive to permit reapplication of the dollar and personnel savings.

Annually each Military Service and Defense Agency is invited to submit candidate proposals for PIF financing. From these candidates, projects are selected for financing on the basis of their expected returns and their potential contribution to Defense objectives.

PIF is unique in several ways. First, projects are ranked on the basis of economic merit with a consideration for their proposed impact upon personnel resources. Secondly, they are subjected to scrutiny by OSD functional and financial analysts to ensure that they represent valid requirements, are in keeping with established investment policies, and align with long range planning. Lastly, they are incorporated into the Defense Budget after Service/Agency prioritization has been accomplished.

In this way, the Department is assured of the fact that essential or priority programs are minimally affected and that each annual budget contains at least some productivity improvement initiatives.

Project documentation must certify that all alternatives, including private sector contracting, have been considered. All projects are justified through economic analysis and, when finally accepted, are considered to be DoD's most cost effective productivity investment opportunities for that year.

Figure 6 provides a graphic view of the potential impact of those projects approved for and included in the FY 1984 budget estimate. A total of 47 projects costing $91.5 million have been selected from a starting list of 200 candidates that exceeded $500 million dollars investment costs. These projects involve first year costs of $75.4 million. They represent investments in 19 functional areas and involve 23 classes of equipment or facilities. A listing of the approved projects for the FY 1984 Budget is provided in Appendix 2. The remainder of the PIF funds requested are to complete prior year projects.

Although some submissions were eliminated from consideration on the basis of inadequate justification or nonalignment with program plans, the majority (75 percent) were eliminated due to the level of funds available. Our inability to finance these projects will cause us to incur lost opportunity costs of over $1 billion over the next five years.

Since its inception in 1981, the PIF program has been used to provide early initiation of many worthwhile and profitable initiatives currently being documented in DoD's Economies and Efficiencies exhibit in the budget. Notable among these is our Logistics Application of Automated Marking and Reading Symbols (LOGMARS) project. Through PIF, we were able to initiate this multi-Service effort across a broad spectrum of functions. As a result, DoD now employs machine-readable bar coding, similar to that used by major retail stores, to inventory and maintain control of supply items and real property, and to track maintenance parts. Early indications are that the savings through LOGMARS will exceed our most optimistic expectations.

The program was first funded in FY 1981. Consequently, only a few of the PIF projects are fully operational at this time due to equipment acquisiton and set-up leadtimes. We are closely following their progress to ensure that benefits occur as predicted. Future reports will incorporate the results of these evaluations.

Component Sponsored Investments (CSIs):

The two funding strategies sponsored by OSD are complemented, during the past several years, by CSI funding. Although Defense guidance has encouraged the establishment of this type funding for all years since the PECI program was established in 1975, only the recognized success of PEIF and PIF efforts has resulted in acceptance by the Service and Defense leaders that more positive actions were needed. The criteria for CSIs are established by the individual Component and typically focus on their particular investment need and productivity goals. In many cases these funds are used to finance PECI investments which have been unfinanced due to the lack of adequate funding levels in the PIF program.

CSI funding competes at all levels of the Service or Agency planning, programming, and budgeting processes; these projects are very subject to the tradeoff considerations that have reduced productivity initiatives in the past. As a result, the program has not been consistent over time. The most recent Defense guidance for FY 1985 again reemphasizes the need for Service/Agency support of productivity improvement through CSI by requiring that these investments be addressed in planning and programming documents.

PRODUCTIVITY INVESTMENT FUNDING— FYS 81, THROUGH 84 INVESTMENT COSTS VERSUS SAVINGS

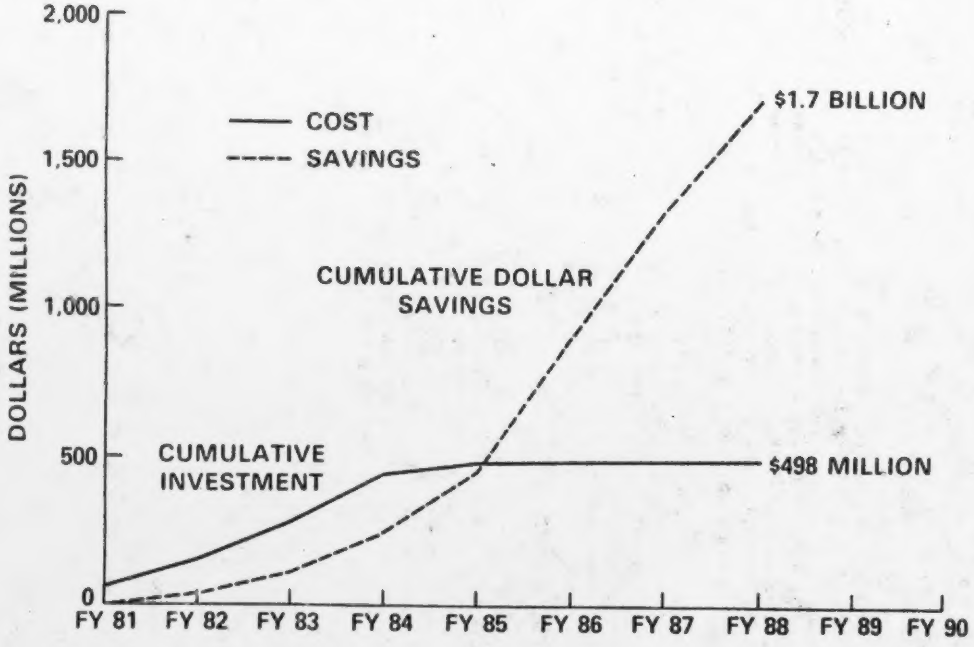


FIGURE 6

SECTION III

THE FUTURE OF THE DOD PECI PROGRAM

Improvement Actions:

DoD is currently undertaking several efforts which will make significant improvements in the operation and accountability provisions of the PECI program. The DoD PECI Program presently operates under the oversight of DPPO. DPPO is directly answerable to the Office of the Assistant Secretary for Manpower, Reserve Affairs and Logistics who has assigned program responsibility. The DPPO staff provides the technical and administrative support to all DoD activities for PIF and provides technical guidance for all other PECI program efforts.

As a part of its research and evaluation efforts, during FY 1983, DPPO plans to conduct studies to determine the potential opportunities for productivity enhancing investment which may exist DoD-wide. This study will interface with several on-going efforts by OSD and the Military Departments to single out promising areas of technology for optimum productivity gain. The objective of this study, is to better focus PECI with readiness goals, overall DoD management objectives and other productivity initiatives. Particular emphasis will be given to ensure that the PECI program fully complements industrial fund capitalization actions while, at the same time, assuring that all managers have the opportunity for innovation. The potential for demonstration or prototype PECI projects is being investigated as well as better means of transporting good investment ideas across all organizations.

Improving Project Accountability:

With the advent of full implementation of PIF projects, avenues of capturing the results of these investments without the need for excessive reporting requirements are being investigated. Concurrently, the need to demonstrate both outstanding achievements and lessons learned from failures to achieve full benefits will be a matter of prime consideration. DPPO is initiating studies to incorporate risk analysis and investment modeling techniques as one means of improving project appraisal processes. In addition, transportable software relating to computer-aided economic analysis and project assessment is being considered. This will assure more uniformity in the way investment opportunities are documented and evaluated at all organizational levels. As previously stated, training courses are being developed to increase the quality of project justifications and to increase the awareness of productivity improvement potential.

Program Support Essentiality:

The future of PECI will depend, in a large part, upon the sustained support of not only Defense management but also of the Congress. Without support of our request for funds, no amount of dedication or optimism can overcome the perception that a lack of adequate financing equates to a lack of support for productivity initiatives. The Department is faced with growing workloads and limited funding. The obvious way to ease this dilemma is to introduce more efficient tools, equipment, and processes into our facilities so that our work force can get about the business of accomplishing their missions. In its small way, PECI performs this function. Adequately funded, it can materially contribute not only to efficiency but to productivity consciousness - an essential ingredient to improved efficiency and economy.

APPENDIX 1

Typical PEIF Fast Payback

Investments

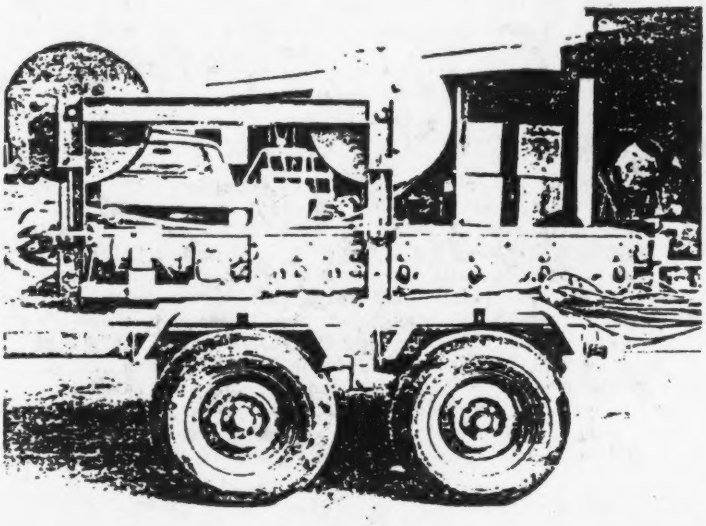


Photo by Richard Gary

Aluminum siding machine takes siding sheets and forms them into desired lengths and widths. The machine has more than paid for itself in reduced maintenance costs and energy savings.

Little machine does big job

by Dianne Taylor

It's a funny looking little machine. Maybe you've seen it sitting in front of one of the buildings on post. It looks like a large metal cart with two large metal wheels mounted on top.

Did you wonder what it was or what it was doing? Actually, the odd little machine does two things for Lt. Col. Larry Unger's Buildings and Grounds Division:

—One, it takes sheet aluminum into its metal maw and forms it into pieces of aluminum siding of various lengths and widths.

Over the last eight months, Post Engineer personnel have installed this aluminum siding on four, wood-frame buildings at Fort Monroe.

Unseen improvements

The improvement in appearance is dramatic, but there are other unseen improvements. For example, a wood-sided building has to be repainted by contractors every three years. An aluminum-sided building does not need painting for 30 years. A wood-sided building has higher maintenance costs due to water and termite damage. This kind of damage is virtually eliminated by the aluminum siding. In addition, the aluminum siding is insulated—it reduces energy costs.

—And second, the funny looking little machine increases productivity for the Directorate of Engineering and Housing. Prior to acquisition of the siding machine, the wood-frame buildings were repainted every three years by contractors. Now, Post Buildings and Grounds personnel can avoid these recurring contract costs as well as reduce maintenance and energy costs.

Total savings to the government are estimated to be $51,000 over the life of the building for the four buildings already sided. The post engineers expect to side another 10 to 12 buildings over the next three to four years with similar savings. Not a bad return on a $9,800 investment.

The aluminum siding machine was purchased under the QRIP Capital Investment Program. The Quick Return On Investment Program can be used to purchase off the shelf tools and equipment ranging in cost from $1,000 to $100,000. The aluminum siding machine is just one such project funded under QRIP. Other projects include automatic data processing, word processing, automatic fuel dispensing systems, infrared cameras, pothole patchers, range plotters, and a host of other productivity increasing pieces of equipment too numerous to name.

Since FY 79, TRADOC has had approximately 90 QRIP projects funded at a total investment of $2.4 million. These projects have increased productivity at 22 TRADOC installations and activities. FY 83 promises to be an even greater year for the QRIP Capital Investment Program.

Computer in the print shop

by Susan McDonald

It sets copy, stores information, and produces large or small type. It's the Defense Depot Tracy, Calif. (DDTC), new modular component system for typesetting - the first of its kind in DLA.

This new system is expected to revolutionize creating and altering all local forms and will be used to make training manuals, graphs, charts, slides and transparencies for overhead projectors.

"The system will eventually be patched through the main computer into word processing centers so that regulations can be placed directly into the typesetter," said Tom Dickson, chief of the administrative services division.

The new equipment uses a video display terminal for placing copy onto "floppy discs." The information is then transferred into the phototypesetter. A cassette of photographic paper is loaded from the typesetter into the printer for processing through photographic chemicals. The paper comes out of the printer as camera ready copy for the print shop to make masters or plates from.

In the past forms, manuals and handbooks were typed on typewriters. Larger size copy had to be created on a verityper or placed on a mockup with rub-on letters—a very time-consuming process. Each time a correction or addition was made, the process had to be repeated.

Use of this new system means no more cutting and pasting for graphic artists. Corrections are made on the video screen before the copy is set and the preview screen allows page and layout correction before the page is printed. The information is stored on the floppy discs which can hold 99 pages of data each.

"When you finish setting one job you simply close the file, cue the machine to typeset and go on to another job," said Rosa Hernandez, visual information specialist. "As you are composing you can call up a secondary file and use it for reference too."

The system is capable of setting type in many sizes and eight different typefaces. It justifies copy to a desired column width and is able to create boxes and horizontal or vertical lines.

"You can merge in new sentences or paragraphs or take out words and paragraphs," said Hernandez. "It makes things much quicker, especially making corrections."

"This is going to make some drastic changes," said forms management officer Kathy Osborne. "We can now convert all of our forms to the standard 8-1/2 by 11 inches without the cost of redrawing them. This is a terrific time to look at changes to forms before they are loaded into the new equipment."

According to Osborne, there are approximately 485 local forms at the depot. Some are used differently from directorate to directorate and are being hand-drawn where modifications are necessary, she said. The photo typesetter will cut down on this hand modification, which costs the depot time and money.

The $33,500 system was purchased through a two year fast payback program which requires strict accounting of actual dollar savings. Dickson said the purchase of the system was justified under current commercial activities studies.

"This is a tool to keep the work in-house and to keep us in business," he said. "We will do the same job, but faster, in a more cost effective manner and with better quality." ■

APPENDIX 2

Listing of Productivity Investment Fund
Projects in FY 1984 Defense Budget

Project No.	Service	Project Title
001COE	Army	Automated Drafting System
001CPO	Army	Civilian Personnel Office Automation
001F	Army	Automated Tank Wash Facility
002COE	Army	Military Construction Program Analysis and Execution System
002T	Army	On-Site Power Co-Generator
003F	Army	Word Processing Systems
006D	Army	Heavy Duty Steerable Pedestals
008D	Army	In-Air Refueling System For Big Crow
008T	Army	Armament Procedures Trainer
009F	Army	Automatic Tank Target System
009T	Army	Computer Based Education System
010D	Army	Aurora Modernization
010T	Army	Modernization of Energy Distribution System
022D	Army	Electronic Imaging Camera
025D	Army	Array Improvement, Missile Hardware Simulation System
030D	Army	Off-Line Provisioning System
035D	Army	Retrofit Robots For Ammo Handling
1FD35	DMA	On-Line Controller
84ASYS	Air Force	TV Ordnance Scoring System
841AFE	Air Force	Conversion to Lower Cost Fuel System
841LOG	Air Force	AF Video Satellite Network
841MAC	Air Force	Design Aided Printer
841SYS	Air Force	System Command Word Processing

FY 1983 PIF Projects (contd)

Project No.	Service	Project Title
841TAC	Air Force	MacDill Natural Gas Conversion System
842SYS	Air Force	Headquarters, AFSC/DA Office Automation
842TAC	Air Force	Radar Tower Reconfiguration
843SYS	Air Force	Engineering Systems Division Information Resources Management System
844TAC	Air Force	Langley Natural Gas Conversion System
848LOG	Air Force	Critical Item Network
DIA005	DIA	Space Management System
Q0003	Marine Corps	Automation of MC Classified Material Control Center
IMA001	Navy	Surface Grinders
IMA005	Navy	Hydraulic Component Tube Repair Center
NA8410	Navy	Machining Center
NA8415	Navy	RF Field Generating System
NC8403	Navy	Container Delivery System
NC8409	Navy	Automated Document Management System
NE8411	Navy	Documentation Development System
NE8416	Navy	Materiels Calibration System
NF8419	Navy	Turnkey Graphics System
NS8404	Navy	Seal Checking Equipment
NSS8406	Navy	NavSea System Office Automation
NS8414	Navy	Digitized Drawing Storage
NS8423	Navy	Automated Property Optical Measurement System
NS8424	Navy	Laser Printing System
PAC003	Navy	Automated Vehicle Fuel Dispensing System
PAC013	Navy	100 Ton Ammunition Travel Lift

FUNDING FOR SPECIFIC ITEMS

Dr. KORB. There are two specific legislative items which are in both Senate and House authorization bills and for which we are seeking funding.

These are the Individual Ready Reserve, the IRR, enlistment and reenlistment bonus programs to get and keep personnel whose skills are essential in a major mobilization. These programs complement the military service obligation extension which we have requested.

Two, a dependent student travel program which would provide travel and transportation entitlements to student dependents of military personnel assigned overseas similar to that provided civilian government employees. This program would allow one annual government-funded round trip when dependent students remain in the continental United States to attend a secondary school or college as an undergraduate.

In addition, we are requesting funding which would allow us to implement the Temporary Lodging Expense allowance. This allowance was first authorized in the Uniformed Services Pay Act of 1981, but Congress has thus far not provided any appropriations for it. As a result, military personnel are continuing to incur substantial out-of-pocket expenses when making a PCS move.

Although the administration did not recommend a military or civilian pay raise for fiscal year 1984, recent congressional actions indicate some form of a pay increase will be enacted. If this turns out to happen, we seek your assistance in appropriating the added funds to finance this raise.

In conclusion, Mr. Chairman, to a large extent, the successes enjoyed by the total force during the past 2 years are the result of congressional support and interest for which we are extremely grateful. It is my intention to cooperate closely with you and, with your help, continue this success that was begun a few years ago and build on the impressive record which we have forged together.

Thank you.

[The prepared statement of Dr. Korb follows:]

PREPARED STATEMENT OF HON. LAWRENCE J. KORB

ASSISTANT SECRETARY OF DEFENSE

MANPOWER, RESERVE AFFAIRS AND LOGISTICS

I. INTRODUCTION

Mr. Chairman and members of the Committee, it is a pleasure to appear before you today to present an overview of the Reagan Administration's defense manpower program for FY 1984 and to discuss with you the manpower issues which we believe are of paramount importance.

Defense manpower is composed of active duty military, the Reserve Components, and civilians. Together these three components constitute our total force. Defense manpower management concerns the effective and efficient integration and support of these three. This statement, accordingly, will address each of the three in turn and then cite the specific assistance being sought from the Congress to enable us to manage more effectively this most important of national security assets.

II. DEFENSE MANPOWER TRENDS

Table 1
DEFENSE MANPOWER TRENDS: SELECTED YEARS
(End of FY Strengths in Thousands)

						Program	Planned
	FY 64	FY 68	FY 78	FY 80	FY 82	FY 83[1]	FY 84
Active Military	2,687	3,547	2,061	2,050	2,109	2,127	2,165
Selected Reserve	953	992	788	851	964	1,002	1,030
Individual Ready Reserve[2]	845	1,571	356	413	396	427	458
Civilians	1,176	1,393	1,017	990	1,030	1,056	1,072

[1] Beginning in FY 1983, reserve personnel on active duty for Training and Administration of Reserves (TAR's) are categorized as Selected Reservists; prior to FY 1983, TAR's were included in active military strengths. FY 1982 TAR strength was 11,000.

[2] Includes Inactive National Guard

As shown in Table 1, FY 1982 active military strength was about 578,000 below the strength levels of 1964, the pre-Vietnam reference year often used in analyses of strength trends. In FY 1983 and FY 1984, the active duty strengths are programmed to increase 18,000 and 56,000, respectively, above the FY 1982 force levels. The proposed increase in the active duty force strength is based on a thorough examination of Reserve Component capabilities.

Table 1 also shows that Selected Reserve strength bottomed out during 1978 at 788,000. Selected Reserve strength is programmed to increase to 1,002,000 in FY 1983 and to continue higher through the mid-1980's.

The Individual Ready Reserve (IRR) strength for FY 1982 was 396,000. Although the IRR strength decreased substantially after the Vietnam conflict and bottomed out in 1978, it is now increasing and we project this increase to continue into the 1980's if proposed initiatives are enacted.

Civilian strengths continue to increase in FY 1984.

III. ACTIVE FORCES

Active Force Personnel Readiness

The overall readiness of an individual unit is based on the status of its personnel as well as its equipment and training levels. The four aggregate indicators which assess personnel readiness levels are:

- Strength — the number of people we have.
- Experience — the grade and experience mix of personnel.

- Skills — occupational qualifications which match the requirements of the job to be done, and
- Stability — the percent of Service members that remains in the Service and in the same unit, from one year to another.

A unit fully manned with the proper mix of experienced personnel with the requisite skills, experience and high stability will report a high level of personnel readiness.

Strength

Table 2 shows active military end strengths by Service for selected years. From the Vietnam drawdown in the early 1970's, through FY 1979, total military strength decreased annually. Beginning with FY 1980, however, this trend has been reversed.

Table 2
ACTIVE MILITARY END-YEAR STRENGTHS BY SERVICE: SELECTED YEARS
(Thousands)

	FY 64	FY 72	FY 78	FY 80	FY 82	Program FY 83 1/	Planned FY 84
Army	973	955	771	777	780	780	783
Navy	668	604	530	527	553	560	572
Marine Corps	190	202	191	188	192	195	197
Air Force	857	750	570	558	583	592	613
DoD Total	2,687	2,512	2,061	2,050	2,109	2,127	2,165

1/Beginning in FY 1983, reserve personnel on active duty for Training and Administration of Reserves (TAR's) are categorized as Selected Reservists; prior to FY 1983, TAR's were included in active military strengths. FY 1982 TAR strength was 11,000.

From FY 1980 to FY 1982 active duty end strength increased by 58,500 personnel, or almost 3 percent. The Navy and Air Force have experienced the greatest growth. For these Services, this growth has allowed both more complete manning of existing units and the addition of new units to the force. The Army and Marines have held their force structure generally constant while increasing their unit manning. Both existing and new force structure units are better manned than in the past.

Experience

Experience is the second component of personnel readiness. Experience is defined as the length-of-service and grade mix of the military population. We have improved the experience of both officer and enlisted personnel.

Since FY 1980, the total officer population has increased nearly 14,000, or over 5 percent. Two-thirds of this net increase (9,100) was among officers with more than four years of service, reflecting an improvement in retention. The career content (the number of officers in over four years of service) increased by almost 5 percent.

Most growth in total officer population has been in the captain and major grades, indicating that more officers are electing to stay in the service at their initial career decision points (generally the fourth or fifth year of service). Furthermore, the number of senior officers is growing at a slower rate than is the total number of officers. The average grade of our officer population has remained unchanged for two years at roughly 03 (captain or, in the Navy, lieutenant).

Similar trends are occurring in the enlisted force. The enlisted career force is increasing at a faster rate than the growth of the total enlisted population. Table 3 displays the actual career content of the enlisted force for FY 1981 and FY 1982 and the projected growth through FY 1984. Actual inventory of the career force increased by 59,000 personnel in FY 1982, due largely to increased reenlistment. More careerists also translates into more NCO's (primarily grades E-5 through E-9) where the population has increased by almost 38,000, or 5 percent. The break-out by Service in Table 4 reflects dramatic gains in the Navy and Marine Corps, and lesser but yet substantial growth in the Army and Air Force.

Table 3
Enlisted Career Force
(5 to 30+ years of service)

FY	Army	Navy[1]	Air Force	Marine Corps	Total
81 actual	283.4	201.2	233.8	49.5	767.9
82 actual	300.3	218.2	250.9	57.6	827.0
83 program	306.8	217.7	259.2	56.1	839.8
84 plan	310.2	229.4	267.7	58.5	865.8

---

[1] In FY 1983 and beyond, TARs are categorized as SELRES; prior to FY 1983, TARs were included in Active Military strengths. By 1982 TAR enlisted career strength was 7,700.

Table 4
Increase in NCO Inventory by Service
FY 1980-82

Service	Number Increase	Percent Increase
Army	10,500	4.1
Navy	13,700	7.3
Marine Corps	6,900	14.5
Air Force	6,600	3.3
TOTAL DoD	37,800	5.5

Note: Numbers do not add due to rounding.

There are four major factors contributing to our enlisted gains. First, all Services are meeting or exceeding the accession goals for non-prior service (NPS) recruits. Second, we are enlisting more prior service personnel, exceeding our FY 1982 goal by nearly 14 percent. Third, reenlistment rates are improving. Our reenlistment rate increased from 55 percent (190,000 reenlistments) in FY 1980 to 68 percent (224,000 reenlistments) in FY 1982. Finally, we have reduced our attrition losses and we fully expect to keep them down.

Skills

Personnel readiness is also affected by the availability at the unit level of personnel in needed skills. Analysis shows recent gains in five skill areas that in the past had contributed to degraded readiness: pilots, combat arms NCO's, Navy Petty Officers, electronics repairmen, and electrical/mechanical equipment repairmen. Table 5 highlights these improvements in manning our most critical skills. As measured from December 1980, the month preceding the change in Administrations, to the end of the 1982 fiscal year, we have increased strengths in each category.

Table 5
More Personnel in Needed Skills

SKILL	POPULATION INCREASE
OFFICER	
Pilots	+1,500
Navy/Marine Corps	+1,000
Air Force	+ 500
Enlisted	
Combat Arms NCO's (E5-E9)	+5,800
Army	+4,600
Marine Corps	+1,200
Navy Petty Officers (E5-E9)	+14,900
Elec. Equip. Repairmen (E1-E9)	+12,700
Elec./Mech. Equip. Repairmen (E1-E9)	+19,600

In addition to our improved manning of critical skill positions, we are maintaining high quality personnel in these skills. For example, among Army combat arms NCOs, 96 percent have at least a high school diploma, with 40 percent in the top half of the aptitude score range; among Marine Corps combat arms NCOs, 93 percent have at least a high school diploma, with 34 percent in the top half of the aptitude score range. This is a definite improvement over previous years.

Five factors are responsible for these trends. First there are the positive accession and retention successes previously cited. Second, our use of enlistment bonuses results in higher quality recruits with greater aptitude for technical training. Third, we are offering more training in areas of greatest need. Fourth, because of the improved recruit quality, attrition during the first six months of service has dropped from 11.1 percent in the FY 1980 cohort to 10.6 percent for the FY 1982 cohort; therefore, more of our personnel who start training are remaining in service to complete training, realizing a more efficient use of our training resources. Last, but not least, our selective reenlistment bonuses have enabled us to meet better our experience shortages in the critical skills.

Stability

Reduced attrition rates and improved retention are beginning to have a positive influence on personnel stability at the unit level. Unit personnel stability is defined as the percent of personnel who remain in the service and in the same unit over the course of a year. A recent sampling of more than 1,100, operational units covering a population of more than 424,000 assigned personnel of all grades and skills, shows that unit personnel stability is indeed beginning to improve—from 48.9 percent overall during FY 1980 to 49.5 percent during FY 1982. We expect this trend towards greater cohesion at the unit level to continue.

Improved Service management and Congressional support for DoD personnel programs have resulted in improvements in the past two years in these dimensions of personnel readiness: strength, experience, skills, and stability. These improvements in turn translate directly into an improved readiness posture for the active force.

Recruiting

In terms of both quantity and quality, FY 1982 was an outstanding recruiting year. Many factors contributed to the favorable FY 1982 recruiting results—recruiting management improvements and new initiatives, the state of the economy, more competitive compensation as a result of Congressional support, and an increase in public appreciation for our men and women in uniform.

Table 7 indicates that in FY 1982 the Defense Department as a whole enlisted 338,200 people. All four Services met or exceeded their enlisted recruiting objectives in all the categories of personnel for which objectives were established: Non-Prior Service (NPS) males, NPS females, and prior service enlistees.

Table 7
FY 1982 RECRUITING RESULTS

	ARMY		NAVY		MARINE CORPS		AIR FORCE		DoD TOTAL	
	NUMBER (000)	PERCENT OF OBJECTIVE	NUMBER (000)	PERCENT OF OBJECTIVE	NUMBER (000)	PERCENT OF OBJECTIVE	NUMBER (000)	PERCENT OF OBJECTIVE	NUMBER (000)	PERCENT OF OBJECTIVE
MALE NPS	105.2	105	71.4	100	35.7	100	58.8	100	271.1	102
FEMALE NPS	15.2	101	8.4	100	2.3	105	8.7	100	34.6	101
TOTAL NPS	120.4	104	79.8	100	38.1	101	67.5	100	305.7	102
PS Accessions	9.8	104	13.0	100	3.6	132	6.1	100	32.5	104
TOTALS	130.2	104	92.8	100	41.6	103	73.6	100	338.2	102

Table 8 shows the mix of male, female, and black non-prior service (NPS) accessions for FY 1981 and FY 1982.

Table 8
NON-PRIOR SERVICE ACCESSIONS--MALE, FEMALE, BLACK
(Thousands)

	Fiscal Year 1981				Fiscal Year 1982			
Service	Total	Percent Male	Percent Female	Percent Black	Total	Percent Male	Percent Female	Percent Black
Army	117.9	84	16	27	120.4	87	13	25
Navy	92.0	89	11	13	79.8	90	10	13
Marine Corps	40.9	94	6	18	38.1	94	6	18
Air Force	76.9	86	14	14	67.5	87	13	16
TOTAL	327.8	87	13	19	305.7	89	11	19

Results through the second quarter of FY 1983 show that all four Services achieved or exceeded their combined enlisted recruiting goals for this period (Table 9).

Table 9
FIRST HALF FY 1983 & FY 1982 ENLISTED ACCESSIONS--ALL SOURCES
(Thousands)

	FY 1982 Thru March			FY 1983 Thru March		
Service	Objective	Actual	Percent of Objective	Objective	Actual	Percent of Objective
Army	62.7	66.5	106	71.0	71.3	100
Navy	40.0	40.6	102	42.7	43.0	101
Marine Corps	17.5	18.2	104	18.9	19.5	103
Air Force	38.1	38.1	100	32.8	32.8	100
TOTAL	158.3	163.4	103	165.5	166.6	101

The DoD enlisted accession requirement for FY 1984 is 350,100 which is 11,900 more than the Services recruited in FY 1982 and about 1,000 more than they have programmed for FY 1983.

The quality of enlistees is measured most frequently in terms of educational attainment and aptitude test scores. A high school diploma is a proven indicator of the ability of individuals to adjust to military life. On the average, a nongraduate is twice as likely to leave the military before completing a three-year enlistment than is a high school diploma graduate. As shown in the following table, the number of non-prior service male high school diploma graduates recruited by all the Services for FY 1982 was 2,200 above the number recruited in FY 1981.

Table 10
NON-PRIOR SERVICE ACCESSIONS—MALES AND FEMALES
HIGH SCHOOL DIPLOMA GRADUATES

(Thousands)

Service	Fiscal Year 1981			Fiscal Year 1982		
	Male	Female	Total	Male	Female	Total
Army	77.5	17.2	94.7	88.4	15.2	103.6
Navy	60.4	9.4	69.7	55.0	7.8	62.8
Marine Corps	30.4	2.3	32.7	30.0	2.3	32.4
Air Force	57.8	9.6	67.4	54.9	8.4	63.3
TOTAL	226.1	38.5	264.6	228.3	33.7	262.0

(Percentage)

Service	Male	Female	Total	Male	Female	Total
Army	78	94	80	84	100	86
Navy	74	93	76	77	93	79
Marine Corps	79	100	80	84	100	85
Air Force	88	88	88	93	96	94
TOTAL	79	92	81	84	97	86

Recruiting of high school diploma graduates for the All Volunteer Force (AVF) continues to be very successful in FY 1983. Table 11 shows that the Army, during the first half of FY 1983, took in about 12,000 more male diploma graduates than for the same period last year.

Table 11
FIRST HALF FY 1983 & FIRST HALF FY 1982
NON-PRIOR SERVICE ACCESSIONS
HIGH SCHOOL DIPLOMA GRADUATES

(Thousands)

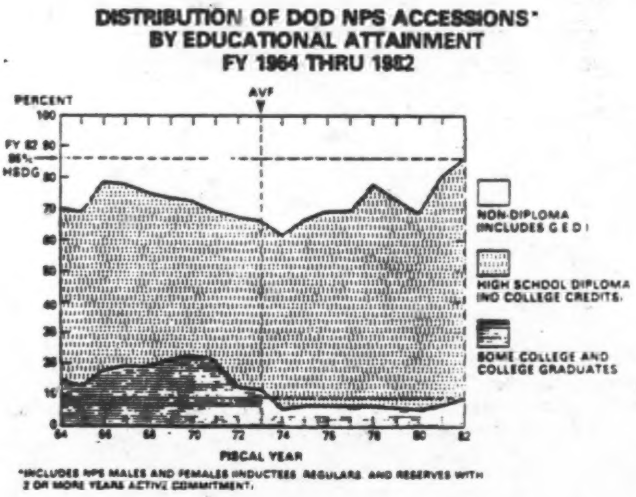
Service	FY 1982 Thru March			FY 1983 Thru March		
	Male	Female	Total	Male	Female	Total
Army	35.1	9.3	44.4	46.9	9.7	56.6
Navy	20.6	4.4	25.0	26.5	4.9	31.5
Marine Corps	11.2	1.1	12.3	14.5	.9	15.4
Air Force	26.8	4.4	31.1	25.1	4.7	29.8
TOTAL	93.7	19.2	112.9	113.0	20.3	133.3

(Percentage)

Service	Male	Female	Total	Male	Female	Total
Army	72	100	76	86	100	88
Navy	71	92	74	83	99+	85
Marine Corps	74	100	76	85	100	86
Air Force	91	92	91	97	99	97
TOTAL	77	96	79	88	99+	89

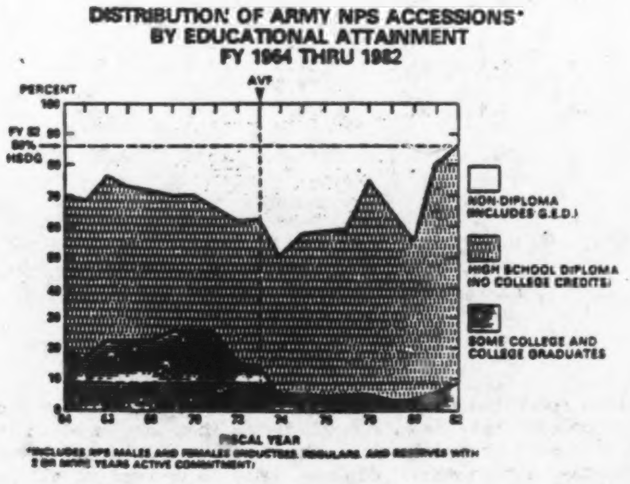
The Services recruited proportionately more individuals with high school diplomas and proportionately fewer non-graduates than are found in the general youth population (18-23 years of age). While 86 percent of all new recruits in FY 1982 possessed a high school diploma, only 75 percent of all people in their age group in the general population have graduated from high school.

Furthermore, comparisons with previous years show that in FY 1982 DoD brought in a higher percentage of high school diploma graduates than ever before—even during conscription. The Army improvement in FY 1982 over previous years was even more significant than for DoD as a whole. Figures 1 and 2 demonstrate the dramatic upturn in the percentage of high school graduates coming into the force.


DISTRIBUTION OF DOD NPS ACCESSIONS*
BY EDUCATIONAL ATTAINMENT
FY 1964 THRU 1982

*INCLUDES NPS MALES AND FEMALES (INDUCTEES, REGULARS, AND RESERVES WITH 2 OR MORE YEARS ACTIVE COMMITMENT)

Figure 1


DISTRIBUTION OF ARMY NPS ACCESSIONS*
BY EDUCATIONAL ATTAINMENT
FY 1964 THRU 1982

*INCLUDES NPS MALES AND FEMALES (INDUCTEES, REGULARS, AND RESERVES WITH 2 OR MORE YEARS ACTIVE COMMITMENT)

Figure 2

The quality of enlisted accessions is also measured by Armed Forces Qualification Test (AFQT) scores. These scores, along with aptitude composite scores derived from the Armed Services Vocational Aptitude Battery (ASVAB), are used in conjunction with educational, medical, and moral standards to determine applicant enlistment eligibility, enlistment guarantees, and assignment to occupations.

For reporting purposes, AFQT scores have traditionally been grouped into five broad categories. Persons who score in Categories I and II are considered to be above average in trainability; those in Category III, average; those in Category IV, below average; and those in Category V, markedly below average. Category V's and non-high school graduate Category IV's are not eligible to enlist under current legislative restrictions. We prefer enlistees in the higher AFQT categories because attrition and associated training costs are lower, and these recruits are more likely to qualify for a greater number of occupational areas. During FY 1982 the number of non-prior service enlistees who scored average or above on the AFQT rose from 82 percent in FY 1981 to 87 percent.

Table 12
NON-PRIOR SERVICE ACCESSIONS—MALES AND FEMALES
AFQT Categories I-III
(Thousands)

	FY 1980		FY 1981		FY 1982	
Service	Number	Percent	Number	Percent	Number	Percent
Army	79.3	50	81.5	69	97.2	81
Navy	72.5	82	80.6	88	71.4	89
Marine Corps	30.6	73	35.6	87	34.8	91
Air Force	65.0	91	71.4	93	63.5	94
TOTAL	247.5	69	269.2	82	266.9	87

Table 13 compares the AFQT score distributions of FY 1982 non-prior service accessions with the score distributions of the youth population in general. It shows that 87 percent of all non-prior service accessions in FY 1982 received scores within AFQT Categories I through III, compared with only 69 percent of America's young people.

Table 13
COMPARISON OF THE AFQT CATEGORY DISTRIBUTIONS OF THE
1980 YOUTH POPULATION AND FY 1982 NON-PRIOR SERVICE ACCESSIONS
(Percent)

Population	I	II	III	IV	V*	TOTAL
1980 Youth Population	4	33	32	24	7	100
1982 Accessions						
DoD	3	34	50	13	0	100
Army	3	29	49	19	0	100
Navy	4	36	49	11	0	100
Marine Corps	2	32	57	9	0	100
Air Force	3	41	50	6	0	100

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*Category V personnel are not eligible for enlistment.

In FY 1982, DoD exceeded the quality minimums mandated by Congress on non-prior service enlistees. While DoD is committed to manning the force with the right numbers and kinds of recruits, we continue to believe that these restrictions hinder management flexibility, require additional recruiting resources, and could affect our ability to meet manpower requirements in the future. Therefore, we are requesting once again, that these restrictions be rescinded.

In order for the Services to continue to attract and retain the manpower that we need to sustain force readiness, it is essential that they continue to have a competitive enlistment package with the requisite level of recruiting resources to make youth aware of Service opportunities. To complement such a package, we have implemented various management initiatives to increase recruiter productivity and improve recruiting management. Since FY 1982 we have doubled funds for Joint Service advertising by adjusting the overall Services' advertising budgets downward. We have been working with various intergovernmental agencies to place military career/occupational information in high schools, post-secondary schools, and state employment agencies. The Services have redesigned recruiter training courses, revised policies on selection and retention of recruiters, implemented actions to improve the alignment of recruiters and markets, and are enhancing their automated job reservation systems for quicker and more accurate response and better quality control.

However, we need the recruiting resources we are requesting in the FY 1984 President's budget to meet both the increased accession requirements and the Congressional mandate concerning recruit quality. The Army, in FY 1984, must recruit at least 18,100 more men and women from the upper AFQT categories than it attracted in FY 1981, and more than 23,500 than in FY 1980. The Army's efforts to meet FY 1984 requirements will have an impact on the recruiting efforts of all the Services and will cause a substantial increase in our demand for high quality youth—with no corresponding increase in supply. In short, greater effort will be demanded of our recruiting force, and that effort will be more costly. It is imperative that the Services be provided the requested recruiting resources for FY 1984.

Enlistment and Reenlistment Bonuses

Another important component of the recruiting package is the enlistment bonus. It is a highly flexible and efficient means of improving recruiting in needed occupations. Enlistment bonus levels and the skills for which bonuses are offered can be easily adjusted to reflect ever-changing supply and demand, thereby allowing the DoD to react quickly to recruiting problems that may arise because of an improved economy and a reduced youth population.

As directed by Congress, DoD has designed and currently is implementing a test of the effectiveness of various bonus levels for three- and four-year enlistments and the interaction between the three- and four-year bonus programs. The test program continues through FY 1983 and ends in June 1984.

As we face a tighter recruiting market in the 1980's, enlistment bonuses will continue to be an important tool in achieving our recruiting goals. The exact amount of future enlistment bonus payments will need to be balanced with the availability and magnitude of other recruitment incentives.

The Selective Reenlistment Bonus program continues to be the cornerstone of our efforts to retain personnel in critical military skills. The bonus is currently being used on a selective basis when cost effectiveness is demonstrated and other less costly options have been fully explored.

Educational Incentives

Educational incentives have proven to be an effective means of attracting high quality personnel to military service. The Veteran's Educational Assistance Program is designed to satisfy the needs of the different Services. It allows a basic benefit which can be supplemented by DoD for particular skills, as required.

At the same time, we are concerned about the effects of the delimiting date of the Vietnam-era GI Bill. As the 1989 expiration date of the program draws near, a sizable number of members eligible for benefits may decide to leave service in order to use them. Replacing these trained and experienced personnel would be expensive and time consuming. While DoD supports extension of the delimiting date, it does not support enactment of a new GI bill at this time.

Officer Accession and Retention

Overall, we have been achieving our officer accession objectives. ROTC continues to be our largest source of newly commissioned officers. With numbers of ROTC scholarships now at reasonable levels, we are turning our attention to "fine-tuning" actions that will help us to attract and commission the most promising students. Specifically, we have submitted legislation providing the authority to enroll selected students who have less than two years of college remaining and to allow students without prior military service to join the two-year ROTC program. We are also considering legislation allowing scholarships to be used for a fifth year of education in specific cases — notably in the scientific and engineering disciplines -- where students cannot complete degree requirements in four years.

Improved retention has also alleviated, but not corrected completely, several specific shortages. For example, while more aviation people are being retained, some shortages still exist because of low retention in previous years. The improvement in retention is strongly influenced by the slowdown of airline hiring and the use of a continuation bonus in the Navy. Retention of nuclear submariners has also improved because of increased financial incentives, but experience gaps remain because of poor retention in earlier years. The Air Force predicts that they will eliminate the overall shortage of engineers by the end of FY 1984, although they will still be short of electrical/electronic engineers.

Personnel Characteristics

Table 14 displays the numbers of women and blacks in the active force for selected years. Women made up nine percent of active duty forces in FY 1982 the same as a year ago; the proportion of blacks, after doubling between FY 1964 and FY 1978, has remained relatively constant over the past few years.

Table 14
ACTIVE FORCE END STRENGTH AND CONTENT[1]
(Thousands)

	FY 64	FY 72	FY 74	FY 78	FY 80	FY 81	FY 82
Total	2,676	2,311	2,151	2,049	2,036	2,069	2,109
Percentage Female	1	2	4	7	8	9	9
Percentage Black	9	12	14	17	20	19	20

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[1] Reported Strength (includes reimbursables and excludes cadets/midshipmen)

More clearly defined requirements for women are being established in all Services. These requirements are being developed on the basis of the proven capability of women to accomplish specific military functions. Military women in all Services are fulfilling vital military requirements with the same high degree of competence as military men. In recognition of the vital role women play in sustaining the readiness of our military forces, we have increased the number of women in uniform by 27 percent from 150,000 to 190,000 over the last three years. Our projections call for continued growth over the next five years. Over the same period, we also expect greater numbers of women to progress into supervisory positions. Although they are now clustered in the mid-to-lower grades, our planned rate of increase over the next five years will permit the experience and grade distribution of military women to approximate more closely that of military men. In FY 1982, women promoted to the grades E-2 through E-9 had less time-in-service than did men so promoted, indicating a more rapid rate of promotion than their male counterparts. Specifically, we project a 24 percent increase in women officers and a 27 percent increase in the top six enlisted grades by 1987. Today, over 190,000 officers and enlisted women account for about 9 percent of the active force compared to 45,000 women who made up 1.5 percent of the active force in 1972.

The minority composition of the armed forces began to grow during the Vietnam War and has continued to increase even more rapidly in the All-Volunteer Force era. The overall minority composition of the active forces is now 27 percent. The active officer force includes 10 percent minorities (not including Warrant Officers, of which 11 percent are minorities); the active enlisted force is 30 percent, a figure that has remained fairly constant for the last two years.

In the male-only population, minorities constitute 27 percent of the total active force—9 percent of all male officers and 30 percent of all male enlisted members. During the period FY 1983-84, we expect no significant changes in the percentages of minorities in the armed forces. Table 15 presents a detailed racial/ethnic and gender breakout.

Table 15
Minority Composition of the Armed Forces

Black	Hispanic	American Indian Alaskan Native	Asian Pacific Islander	Other
Enlisted-Male/Female				
397,500 (22%)	72,800 (4%)	13,100 (1%)	39,100 (2%)	23,600 (1%)
Enlisted-Female Only				
45,900 (28%)	5,200 (3%)	1,300 (1%)	1,900 (1%)	2,200 (1%)
Enlisted-Male Only				
351,700 (20%)	67,600 (4%)	11,800 (1%)	37,200 (2%)	21,400 (1%)
Officer-Male/Female				
15,400 (6%)	3,600 (1%)	1,100 (.5%)	3,000 (1%)	5,000 (2%)
Officer-Female Only				
2,800 (11%)	400 (2%)	100 (.5%)	400 (2%)	700 (3%)
Officer-Male Only				
12,600 (5%)	3,200 (1%)	1,000 (.5%)	2,600 (1%)	4,300 (2%)

The Department of Defense is committed to equal opportunity and the equitable management of all human resources. Our goal is to allow all personnel in the Armed Forces to realize their full potential, regardless of gender, race, or ethnicity, while at the same time maximizing the personnel readiness of the force.

Training

We continue to place a high priority on both individual and unit training. The trend toward more sophisticated equipment poses a real challenge to the training establishment. This challenge is mitigated to some extent by improvements in the recruitment of more trainable people and the retention of more senior people capable of providing good instruction. While this favorable situation lasts and if adequate resources are made available, the Services can continue to provide well-trained graduates to the operating forces.

We need additional emphasis on installation schools located on the bases of operating forces. Schools of this type have been quite successful, especially in the Air Force and the Navy/Marine Corps aviation communities, because of the ready availability of the proper types of equipment and the opportunity for close liaison between schools and local commanders. The Army has requested funds in the FY 1984 budget for a modest beginning of a similar system of schools. Another continuing objective in all four Services will be to provide sound training to develop the supervisory and technical skills of junior noncommissioned officers and technicians.

At present, the collective training of military units presents greater problems than individual training. The limited number and size of adequate training areas is a growing challenge. Essentially, the ground and airspace that the Services had available for use thirty years ago is the same space they have today. Thirty years ago this space was marginally adequate. Today, with the increased tempo and speed of maneuver and the longer range of weapons, ingenuity is required to make training realistic within the same space.

As one way of compensating for space limitations the Services are continuing to develop and use simulators and other training devices, designed to improve the effectiveness of training. For example, the Navy has begun using the newly installed Naval Electronic Warfare Training System (NEWTS) for school training of Electronic Warfare operators. NEWTS provides electronic information for intelligence gathering and analysis in a setting that is a very close representation of conditions at sea.

While we continue to plan more research into training technology and improved application of that technology in order to continue to improve the quality of training, its effectiveness will be primarily determined by the quality and numbers of careerists—the service trainers—we can retain. The increase of the career force and its enhanced quality portends well for training despite problems and challenges generated by technology advances and shortages of space for training. Nonetheless, sufficient funds must be made available in order to take advantage of service training innovations and initiatives. Congressional approval of requests for ammunition, fuel, and spare parts will allow training progress essential to force readiness.

Military Compensation

Following the improvements in military compensation that began in late 1980, we made substantial increases in 1981. In addition to an average 14.3 percent pay raise, the Uniformed Services Pay Act of 1981 contained increases in a number of special and incentive pays, an increase in the maximum enlistment bonus from $5,000 to $8,000 for four-year enlistments and a $4,000 maximum for three-year enlistments for the Army on a test basis, and improvements to travel and transportation allowances.

For FY 1984 we support the provision in the authorization bill wich sets up a dependent student travel program which would provide travel and transportation entitlements to student dependents of military personnel assigned overseas. The program would allow one annual government-funded round trip when dependent students remain in CONUS to attend a secondary school or college as an undergraduate.

In addition, we are requesting funding which would allow us to implement the Temporary Lodging Expense (TLE) allowance. This allowance was first authorized in the Uniformed Service Pay Act of 1981, but Congress has thus far not provided any appropriations for it. As a result, military personnel are continuing to incur substantial out-of-pocket expenses when making a PCS move.

We also have ongoing the Fifth Quadrennial Review of Military Compensation. The objective of the review is to assess the military estate program including the retirement system, special and incentive pays, and the capability of the military compensation system to attract and retain technical specialists. A report is scheduled for release in late 1983.

Working, Living Conditions and Facilities

The human dimension of service life — the environment in which our military people work and live — is a primary concern of this Administration. Improving the quality of life is vital to the recruitment, retention, discipline, morale, and readiness of military members. Many of our people are working and living in old, crowded, and obsolete buildings that adversely affect our readiness by causing low morale, and detracting from our efforts to retain valuable personnel. We are committed to providing our people with decent places to work and live. Priority is placed on improving conditions in remote, overseas locations.

To improve afloat conditions, the Navy is enhancing shipboard habitability. Although space on a ship is limited, amenities are being added to make sea duty more tolerable.

To improve conditions ashore, each Service is constructing new facilities, or replacing or modernizing existing inadequate facilities. For military construction and family housing, we are requesting $8.8 billion, 22 percent over the amount appropriated last year. Additionally, $7.6 billion is being requested for Real Property Maintenance Activities. Because these efforts were underfunded in past years, this Administration has increased funding to ensure that the construction and maintenance backlogs are reduced.

Families

We are concerned about the education available to the dependents of our military personnel.

We need legislation to keep the administration of our overseas schools, the Department of Defense Dependents Schools (DoDDS), under the Defense Department. Public Law 96-88, as amended by the FY 1983 Defense Authorization Act, requires DoDDS to transfer to the Department of Education (DoE) no later than May 4, 1984. The Administration opposes this transfer because it is administratively more efficient to retain the Defense overseas schools within DoD. Legislation to repeal the transfer is part of the DoD Authorization Bill.

We ask support for the development of the special programs, required by statute, to serve students pursuing interests in vocational education, students of limited English-speaking ability, the handicapped, the talented and gifted, and other students in the system with special needs in the DoDDS budget request. The increases proposed for this year will keep the phased development of these programs on schedule and will fulfill the Department's commitment to implement statutory requirements at the earliest practicable date.

We also ask support for the funds for operation of our "Section 6 Schools." These are school systems on 18 military bases in the United States and Puerto Rico which are operated directly by the Federal Government rather than by the states or local jurisdictions. The Budget Reconciliation Act of 1981 transferred funding responsibility for Section 6 Schools from the Secretary of Education to the Secretary of Defense. This transition is now complete with the appropriation of constructions funds for needed facilities and additions, as well as operating funds, for FY 1983. The necessary management structure within the Department of Defense is also now in place. The FY 1984 budget request contains funds for continued operation of the schools.

Besides having dependents in overseas schools and in Section 6 schools, many dependents attend schools operated by the states or by local jurisdictions. In several cases, public school districts across the nation are still threatening to charge tuition for defense dependents, exclude them from school, or close their doors completely. The Secretary of Defense remains committed to ensuring that all defense dependents have access to a free public education.

We are considering additional initiatives to improve military family life in FY 1984: educational and employment opportunities for spouses; improved services for the family; and upgrading the quality of medical and dental services available to family members and service members. In accordance with the President's program, we will also direct more effort toward self-help projects and use of volunteers in community and youth activities.

IV. RESERVE FORCES MANPOWER

The over one million members of the Ready Reserve of the United States represent a body of highly trained, highly skilled professionals whose sense of duty and demonstrated ability is one of the main cornerstones of our national defense posture. The Reserve Components now constitute 50% of the non-strategic combat capability and two-thirds of combat support and combat service support capability of the United States. In the event of a conflict the individuals and units of the Guard and reserve will deploy with the active forces. Therefore, their mission today demands that they be as capable and professional as their Active Component counterparts. The capabilities they represent have resulted in their full integration into the daily operations and contingency requirements of the Total Force. In many senses they are part time professionals. They constantly meet and exceed the most stringent of military standards.

In addressing the subject of Reserve manpower, it is important to recognize that Reserve Component units of the Army, Navy, Air Force, and Marine Corps and Army and Air National Guard are a defense bargain. In their absence, the American taxpayer would be severely burdened supporting a much larger active force. Many of these units will be committed to combat immediately following mobilization, some before regular units. Therefore, enhancing the recruiting and retention of personnel for the Guard and Reserve and ensuring that their equipment and training lead to true combat capability are vital to our national security.

Active/Reserve Mix

The total force mix of Active and Reserve components continues to receive close attention within the Department of Defense. The Senate Appropriations Committee in its report on the FY 1983 Defense budget request, directed the Department to report to the Congress how Reserve and Guard forces can best be used in order to achieve our national defense objectives. The Committee required an assessment of various mission categories to determine if the present division of responsibilities achieves the goals of the total force concept.

The first installment of the requested report was submitted to the Committee on July 1, 1983. A second installment will be submitted in late August and the final installment will be provided when the President's FY 1985 Budget is submitted to the Congress.

Selected Reserve Strength

We have continued to be successful in improving the strength of the Reserve Components. This growth follows a period from FY 1974 through FY 1978 in which strength drastically declined. The first quarter of FY 1983 appears to show continued increases in strength.

Table 16 displays the strength of the Selected Reserve by component for the period from the end of FY 1982 through the end of FY 1985.

Table 16
SELECTED RESERVE STRENGTH BY COMPONENT
(End FY - 000's)

Component	FY 1982 Actual	FY 1983 Estimate	FY 1984 Request	FY 1985 Planned
Army National Guard	407.6	417.0	421.1	435.3
Army Reserve	256.7	268.5	272.9	282.4
Naval Reserve	93.7	105.8	119.0	126.4
Marine Corps Reserve	40.1	42.6	43.4	44.2
Air National Guard	100.7	101.8	104.1	106.1
Air Force Reserve	64.4	66.6	69.9	74.0
DoD Total	963.2	1,002.3	1,030.4	1,068.3

Overall, the FY 1984 request will allow the DoD to fill 85.4 percent of its Selected Reserve wartime unit requirements. For FY 1984 the trained strengths of the Air Components and the Marine Reserve will be between 95 percent and 100 percent of their wartime requirements. The Army Components are filled at approximately 82 percent of their requirements and the Naval Reserve at 84 percent.

From the end of the draft and the beginning of the All-Volunteer Force in FY 1974 through the end of FY 1978, the Reserve Components experienced a significant strength decline of 136,800. In the Army National Guard and Army Reserve alone this decline totaled 111,500. Since FY 1979 the Department has had an aggressive program to rebuild strength in the Selected Reserve. This section will concentrate on those initiatives which have been successful in rebuilding that strength.

In FY 1979 Congress authorized and funded an incentive program for enlistment and reenlistment in the Selected Reserve. This program has been increased every year since then. Its actual cost was $47.0 million in FY 1981 and $58.1 million in FY 1982. We expect to spend $78.5 million in FY 1983 and are requesting a total of $95.0 million for these incentives for FY 1984. The authorized incentives are an enlistment bonus, educational assistance program, reenlistment bonus, affiliation bonus, and a student loan repayment program. The FY 1982 DoD Authorizations Act extended the authority for the Affiliation Bonus through FY 1985 and Loan Repayment through FY 1983. As reflected in our 1978 reenlistment test program, the average term of commitment was 4.4 years for the test region and 1.3 years for the control region. This significant change in terms of commitment is reflected in the increasing strength of our Reserve units.

In addition to a successful incentive program, we offer non-prior service individuals shorter enlistment terms in the Selected Reserve. Those joining the Army Selected Reserve may do so for a three-year term with three additional years to be served in the IRR. Those joining other Services' Selected Reserve may do so for four years, with a balance of two years in the IRR. In the past a full six years in the Selected Reserve was required of all enlistees. Equally as important was the creation by Congressional authorization of a full-time Reserve recruiting force which placed Reserve recruiting on an equal footing with active recruiting. This has proven to be an effective step as reflected by improving strength posture of the Reserve components.

To make Reserve service available to more people, a split training option was begun to allow students to participate in the Selected Reserve without interfering with normal school schedules. By splitting the usual 12-week initial active duty for training period into two increments, we can enlist high school and college students while they are still in school.

The unprogrammed loss of members before they completed their contractually-obligated term was once the major cause of strength shortages. To combat this, a program for the control of attrition has been implemented. This program encompasses the establishment of loss reduction goals; an accession cohort tracking system for better management; an increase in the Full-Time Support Program to upgrade training and readiness; revision of existing outmoded regulations; research in recruiting and retention; improvement of financial incentives; and improvement of training and leadership.

Pretrained Individual Manpower

One of our most serious concerns is that enough individuals with prior military training are immediately available as fillers for understrength units and replacements for casualties during the early days of a full mobilization before new enlistees or inductees can be called up and trained. This demand can only be met by pretrained manpower—members of the Individual Ready Reserve (IRR), Inactive National Guard (ING), Standby Reserve, and retired military personnel.

Initiatives to improve IRR strength have resulted in an increase of about 40,000 individuals since its low point in mid-1978. These initiatives, primarily no-cost legal or policy changes, included stopping automatic transfers to the Standby Reserve, improving personnel management, streamlining administrative transfer procedures between the active force and the IRR, transferring individuals with mobilization potential to the IRR in lieu of discharging them from the active force, and giving women and enlistees 26 years of age and older the six-year service obligation. Other initiatives, already implemented, which will increase the size of the IRR in future years include starting an enlistee's six-year obligation from the time active duty begins instead of from the time the enlistment contract is signed and requiring prior service enlistees to complete any portion of the unfulfilled six-year military service obligation.

While these low-cost or no-cost initiatives have significantly increased IRR strength, by themselves they cannot increase strength sufficiently to meet wartime requirements. The no-cost initiatives have been virtually exhausted. Without new programs to retain people in the IRR or provide another method of entry into it, IRR strength will remain relatively constant as shown in the following table.

Table 17
IRR STRENGTH BY SERVICE
(End FY - 000s)

Service	Actual FY 1980	Actual FY 1981	Actual FY 1982	Projected FY 1983
Army (includes ING)	212	223	230	239
Navy	97	99	78	75
Marine Corps	57	52	45	43
Air Force(includes ING)	47	45	43	36
DoD Total	413	419	396	393

As the President's Military Manpower Task Force found, the best and most efficient long-term solution to the shortage of pretrained individuals is to increase the length of military service obligation above its current level of six years. We are asking Congress to grant authority to the Secretary of Defense and the Secretary of Transportation to increase this obligation by two years to a maximum of eight years. The amount of time served on active duty or in the Selected Reserve would not be affected, but the time served in the IRR before normal discharge would be extended. This change would produce the manpower needed. However, because we do not think it should be retroactive, it will take six years after enactment before any gains in IRR strength are obtained. The proposed legislation (DoD 98-60) has been submitted to Congress. During the interim period other initiatives and incentives will be necessary to generate strength increases.

An enhanced IRR reenlistment bonus program appears to possess the greatest potential to increase IRR strength significantly in the near term. During FY 1981, Congress authorized a $600 reenlistment bonus for individuals who completed their military service obligation and reenlisted in the IRR or ING for three years. Results of this program indicate that the bonus was too small to be effective in increasing strength to the desired degree. The bonus authority was not extended, and the bonus ended on September 30, 1981.

Another initiative is the IRR direct enlistment option that the Army began in February 1983. This program will seek to have individuals join the Army, attend initial training in shortage skills, and complete their remaining service obligation in the IRR. These trained soldiers may either opt for service on active duty or in the Selected Reserve. A modest enlistment bonus for this program is proposed. Extended IRR service would require periodic refresher training for skills to be retained.

Legislation to reinstate an IRR reenlistment bonus at the $900 level and for a direct enlistment bonus of up to $1,000 has been submitted to Congress. IRR incentives could be phased down or eliminated after the longer military service obligation goes into effect. Currently, the only benefit of IRR membership is the opportunity to serve the nation quickly in the event of war--not a sufficiently attractive inducement to cause many IRR members to reenlist.

To be consistent with our goal to create a more viable pretrained manpower resource, we need to provide the Services with the funds and manpower to manage these assets properly. This management includes personnel records updating and maintenance; screening of key employees; providing physical examinations; establishing dependent entitlements; updating security clearances; offering training opportunities; and providing pay and other financial services when appropriate.

Our FY 1984 budget request includes resources to continue initiatives in this area such as peacetime preassignment and predesignation of individuals to mobilization positions, provision of training opportunities for more IRR members, expansion of service programs for the identification of mobilization positions that retirees can fill, maintenance of personnel files on retirees, peacetime assignment of retirees to mobilization positions, and streamlining of mobilization procedures for Standby Reservists.

We are confident that this integrated program of strength increases and improved management can resolve the mobilization manpower shortages by 1990. However, to do so, we must enact the entire legislative package during this session of Congress.

V. CIVILIAN MANPOWER

Background

The civilian workforce performs a broad range of tasks in areas that include research and development, medical care, procurement and supply, base operations, logistics support, depot maintenance, and administration. It is DoD policy to minimize requirements for uniformed personnel by employing DoD civilians or private contractors to perform jobs which are not needed for deployment or military rotation, and where their use will not impact adversely on combat readiness and war fighting capability.

As of September 1982, DoD employed 1,029,900 civilians in support of military functions as follows:

Table 18
DoD CIVILIAN WORKFORCE
(000's)

Army	379.3
Navy	319.6
Air Force	248.5
Defense Agencies	82.5
Total	1,029.9

The distribution of civilians among the components is based on individual service missions, workloads associated with those missions, and varying uses of resources including capital investment and contract personnel. Consequently, total civilian employment and its distribution among the components will vary from year to year.

About eight percent of the total in FY 1982 were indirect hire foreign nationals who support U.S. military forces overseas under contracts or agreements. The balance were direct hire employees subject to personnel policies and priorities established by DoD and its components. In addition to the civilians supporting military functions, 31,600 direct hire civilians were engaged in civil functions, most in the Army Corps of Engineers. Sixty-five percent of the entire civilian workforce were General Schedule employees, and 35 percent were blue collar workers subject to Federal Wage System rules. Over half of the General Schedule workforce ranked GS-7 or lower at the end of September 1982.

The Department is a strong advocate of equal employment opportunity. As a result of our efforts, approximately one-fourth of our workforce are minorities, and one-third are women.

Only a very small fraction of our civilian workforce is employed in administrative overhead functions. Most DoD civilians perform functions essential to near-term readiness. For instance, 42 percent of FY 1982 end strength supported logistics functions and 14 percent worked in training, medical care, and other activities directly supporting military personnel. Approximately 9 percent were in general purpose forces operations, 2 percent in strategic forces operations, 2 percent in airlift and sealift operations, and 8 percent supported Guard and Reserve operations. Intelligence functions accounted for 4 percent, and research and development totalled 8 percent. We also assist other nations through support of alliances, foreign military sales, and other functions with approximately 6 percent of our workforce.

DoD employs a wide spectrum of occupational groups, all of which are linked to essential Defense missions. In FY 1982, almost two-thirds of a million white collar workers supporting Defense missions were distributed into broad functional occupational groups. The groups are administrative (25%), clerical (33%), technical (19%), professional (18%) and other (5%).

Close to one-third of a million blue collar labor force were concentrated in depot-level maintenance and repair of aircraft and ships and in the support of base operations. Skilled crafts accounted for 82 percent, including electronic mechanics and electricians, machine tool, metal workers, pipe fitters, aircraft mechanics and various mechanics, repairmen, production workers, and technicians. The other 18 percent were employed in installation maintenance, logistics support, and vehicle operation.

Civilian Manpower Request

Our intention to employ the number of civilians necessary to meet our essential readiness goals is demonstrated by the reversal of Defense employment trends of the previous decade. Civilian end strength declined by about 30 percent between 1968 and 1980.

In FY 1981, this Administration reversed the trend as follows:

Table 19
DoD Civilian Employment
(in thousands)

	Actual				Programmed	
	FY 68	FY 80	FY 81	FY 82	FY 83	FY 84
Total*	1,393	990	1,019	1,030	1,056	1,072
Direct Hire*	1,274	916	940	947	969	986
Indirect Hire	119	75	80	83	87	86

*Excludes civil functions.

In FY 1982 Congress authorized a strength of 1,024,500 civilians. DoD used its 2 percent flexibility to increase strength to 1,029,854. These increases were needed to complete work in-house that we thought would be accomplished through cost efficient contracting and to upgrade facilities in Europe, reduce Defense Investigative Service backlogs, and support increased workloads in the Defense Logistics Agency.

We expect to use the maximum two percent flexibility in FY 1983. After Congress authorized 1,050,060 civilians, the FY 1983 program was adjusted upward to 1,056,185 as part of the FY 1984 budget preparation. However, since the FY 1983 DoD Appropriation Act exempted industrially funded activities from statutory or administrative ceilings, the higher FY 1983 total is only an estimate. DoD plans to evalute how the lifting of ceilings affects the operations of industrially funded activities in 1983. Data on staffing practices, capital investments, outputs, and costs will be collected and compared to performance measures from earlier years.

At the direction of Congress, the programmed levels for FY 1983 were not reduced to account for anticipated conversions to contract. This accounts for much of the apparent growth over the FY 1982 level. This restoration of spaces carries over into future years. The FY 1983 totals also reflect the Congressional prohibition on military-civilian conversions.

An increase of 16,000 civilians is programmed for DoD in FY 1984. This increase is necessary to maintain an adequate defense capability. The growth will occur primarily in readiness-related areas such as maintenance support, supply inventory control, medical care, weapons modernization programs, military construction, and sealift activities. The FY 1984 levels, like the 1983 levels, do not reflect anticipated conversions to contract.

Efforts to Achieve More Efficient Operations

We believe that it is essential to find more efficient ways of conducting business. We are actively pursuing a productivity improvement strategy to insure that resources are used in the most efficient manner. This strategy employs three interrelated approaches: operational improvements through efficiency reviews, commercial activity cost studies, and intra- or inter-service support agreements; funding productivity enhancing capital investments; and workforce motivation efforts. We need your support and endorsement of our efforts in order to achieve their efficiency objectives.

The FY 1984 budget contains requests for $178 million in Productivity Enhancing Capital Investment funds. This request is to fund investments which will result in future projected life-time savings of over $1.5 billion dollars. This reflects an internal rate of return of almost 80 percent. From a personnel standpoint, the investments will free up the equivalent of over 4,500 military and civilian spaces to be realigned to direct and support mission areas. Availability of such capital investment funds will improve the potential payoff from the efficiency review process.

Last year the Appropriations Committee reduced our funding request by $28 million or 21 percent. As a result we expect to pay an additional $130 million more over the next five years than we would have had to spend to accomplish the same workload with more efficient equipment and processes. We request your support of our productivity investment fund program in order to maintain our commitment to innovation and productivity improvements.

VI. MANPOWER MOBILIZATION

This Administration places great importance on creating a capability to respond with appropriate military measures to a set of geographically dispersed, simultaneous emergencies. Toward this end, we have undertaken numerous initiatives to improve our mobilization capabilities during the past year.

Over the past two years, we have increased emphasis on military mobilization planning, conventional force deployment planning, and contingency mission resource requirements. Because of the broadening scope and importance of these programs, the increasing interest in mobilization planning at the highest levels of government, and the continuing contacts required with top government officials, we established the new position of Deputy Assistant Secretary of Defense for Mobilization Planning and Requirements in the Office of the Assistant Secretary of Defense for Manpower, Reserve Affairs, and Logistics.

Late in 1981, the President established the Emergency Mobilization Preparedness Board (EMPB), a senior-level interdepartmental organization for the coordination of mobilization planning and guidance. The EMPB has chartered 12 interdepartmental working groups organized along functional lines. DoD actively participates in all of these working groups. I chair one of them—the Military Mobilization Working Group.

Currently my working group is:

- Developing a common set of scenarios to guide all Federal agency planning.
- Defining the kinds and amounts of resources the Department of Defense will require from the economy in a military crisis as well as determining the process for ensuring the acquisition of these resources with the aid of the other Federal agencies.
- Determining how best to meet our needs for health care personnel in a crisis.
- Developing the kinds, amounts, and process for ensuring non-Defense support for the deployment of our forces in time of crisis.

I believe this interagency role will pay big dividends in national preparedness.

We have been improving the Wartime Manpower Planning System (WARMAPS), the authoritative DoD-wide structure and source for time-phased, wartime military manpower program data. WARMAPS institutionalizes the computation, presentation, and justification of projected wartime manpower needs and assets by providing a set of common definitions, parameters, computations, and data displays. Furthermore, the system is a data tool for programs to satisfy projected trained manpower needs in wartime and provides a common basis for reviewing Service projections of wartime manpower needs. The latest WARMAPS manpower shortfall data are shown at Table 20:

TABLE 20
Estimated Wartime Military Manpower Shortfalls in FY 1988*

Army	110,000 at M+120
Navy	15,000 at M+30
Air Force	2,000 at M+60
Marine Corps	0

*Only the peak shortfall between M-day and M+180 days is shown for each service.

Since end FY 1980 we have made substantial increases in the supply of trained manpower at the time of mobilization. In the Army alone, the increase in trained manpower from end FY 1980 to end FY 1982 was more than 140,000. We estimate an additional 220,000 trained people will be added by FY 1988. However, the need for manpower is also increasing rapidly.

The gross manpower shortfalls shown in Table 20 may obscure more difficult manpower problems in particular skills and grades. For example, the Army shortage in enlisted combat skills is estimated by FY 1988 to be about 168,000. To combat this chronic problem we have, as mentioned earlier, asked for an extension of the military service obligation. Also, we have requested additional legislation for IRR bonuses, which we intend to target at particular occupations where shortages exist or are anticipated. These legislative initiatives, together with others resulting from the recommendations of the President's Military Manpower Task Force and within the authority of the Secretary of Defense, have the potential for eliminating the Army IRR shortfall by 1990.

Mobilization of our military resources also requires a concurrent expansion of activity by the DoD civilian work force. Planning for civilian mobilization, however, had been neglected for many years prior to 1981. Since then, the Services and Defense Agencies have taken major steps to improve civilian preparedness. All DoD Components now are required every two years to revise their estimates of how many additional civilians would be needed for each activity during a full mobilization. These emergency personnel would replace recalled reservists and military retirees. They would also handle expanded workloads in logistics, maintenance, and other support functions. Procedures are being evaluated to recruit these people through the help of the Department of Labor, rehiring of civilian retirees, and other measures.

VII. NATO PROGRAMS

There are several programs critical to the ability of our forces to deter war in Europe. These are U.S. troop strength in Europe, POMCUS[1], wartime host nation support (WHNS), NATO-related training, and maneuver damage claims. It is with great concern that I seek your support for them.

The existence of a strong, free, and independent Western Europe is vital to the long-term security of the United States. Europe has enjoyed an extended period of peace and prosperity since the close of World War II. Central to the maintenance of that peace and prosperity have been the North Atlantic Treaty Organization (NATO) and the defense contribution made by the United States within the NATO framework. The presence of more than 300,000 forward-deployed U.S. troops, and our ability to reinforce Europe rapidly from the United States in a crisis, have contributed to a credible and effective deterrent.

It is our firm belief that recent Congressional actions regarding the POMCUS, the wartime host nation support (WHNS) programs and ceiling imposed on troop levels in Europe endanger our ability to fight and reinforce effectively and at the same time hamper the military revitalization and political cohesion of NATO. Last year's Congress failed to fund either POMCUS Division

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[1] POMCUS (which stands for Prepositioned Materiel Configured to Unit Sets) provides a means of rapidly reinforcing Western Europe in a crisis by storing the heavy equipment for six U.S. divisions in Europe.

Sets 5 and 6 or the US-German WHNS program and thereby undermined these two important cooperative initiatives to strengthen the conventional defense of Western Europe. In failing to fund these programs, Congress has argued that our NATO allies need to assume a larger share of the conventional defense burden in Europe. Ironically, these programs are ones that in fact would cause the allies to assume a larger share of that burden. Additionally, the placing of an artificial ceiling on our troop levels decreases our immediate combat capability and readiness.

While there is general agreement that both we and our allies need to do more, we will fail in that objective if we unilaterally draw down our forces or withdraw from agreements that were negotiated for the benefit, and at the urging, of the United States. The signal sent to our NATO allies by the FY 1983 troop ceiling in Europe was very damaging. It weakens our force capability and damages our ability to negotiate greater contributions on the part of our allies. Wartime Host Nation Support (WHNS) and POMCUS are integral parts of a trans-Atlantic bargain--the Long Term Defense Program (LTDP), agreed to by NATO Heads of State at the May 1978 Washington Summit. Under its terms, the United States agreed to provide NATO with an essential D-Day force of ten divisions and associated air support in exchange for increased allied support for U.S. forward-deployed and reinforcing troops. When the U.S. and its NATO partners approved this program in 1978, they also agreed to the prepositioning of heavy equipment for three additional U.S. divisions in the Central Region, for a total of six division sets of POMCUS. Our allies agreed to provide support for these additional U.S. forces and to acquire the land and buildings necessary to prestock U.S. military equipment that would be used by those units.

Our European allies have kept their part of the bargain. We cannot expect to improve overall allied burden-sharing if we fail to fund our share of key programs designed for that purpose. More specifically, if the United States reneges on its commitments regarding wartime host nation support and POMCUS, we cannot expect to be successful in obtaining additional burden-sharing agreements with our NATO allies, such as the Master Restationing Plan currently being negotiated with Germany. Moreover, we give the allies an excuse to renege on agreements already made.

POMCUS

It is critically important that the United States follow through with its POMCUS program. Both Supreme Allied Commander Europe and the Commander-in-Chief, U.S. Army Europe have repeatedly stated that the full POMCUS program for six division sets is a military necessity. There have been suggestions that we should procure fast sealift rather than preposition these last two POMCUS division sets. In theory, of course, this is a possibility. But the costs would be enormous, and we could not acquire adequate quantities of fast sealift soon enough to provide a ten-division D-Day capability in the mid-1980s.

The Belgians and the Dutch have gone to great efforts to find suitable sites for Division Sets 5 and 6 in their densely-populated countries, and they have spent approximately fifty million dollars for site acquisition. The NATO Infrastructure Program has allocated more than 180 million dollars for construction at the sites for Sets 5 and 6. The failure of the United States to fulfill its POMCUS commitments could have serious political repercussions, particularly in Belgium and the Netherlands, where the planned deployment of ground-launched cruise missiles remains an important—although controversial—objective.

Another important concern has been the impact of POMCUS on the readiness of active and Reserve Component units. This concern was cited last year by the Appropriations Committees to support the decision not to fund the program in FY 1983. This should not be a concern. Several years ago we were withdrawing equipment from CONUS units to fill POMCUS shortages. But the Secretary of Defense has approved an Army recommendation that POMCUS be filled from new procurement and depot over-haul equipment. Thus, we have adjusted the POMCUS fill schedule so as to negate its impact on CONUS units. Moreover, the Army procurement program has been substantially expanded since that time.

President Reagan's FY 1984 budget request includes seventeen million dollars for transportation costs and other miscellaneous funds to support our fill of POMCUS Division Sets 5 and 6 when the sites become available late in

1983. In addition, we ask that Section 773 of the General Provisions of the Continuing Resolution Authority be rescinded. That section, which prohibits the use of funds for POMCUS in excess of four division sets must be rescinded to allow us to proceed with the program.

WHNS

We have made real progess in developing and expanding Wartime Host Nation support arrangements with our NATO allies. Our most dramatic achievement to date has been with the Germans. Almost three years ago we entered negotiations with the Federal Republic of Germany to seek a solution to critical shortages in the U.S. combat service support units that give our forward-deployed and our early-reinforcing combat units the support they need to fight. On April 15, 1982, we reached agreement on a program under which the Germans will provide approximately 93,000 reservists, in time of crisis or war, to perform support functions that otherwise would require U.S. troops.

The WHNS Agreement with the Germans says we will share, approximately equally, the total costs of this program to support U.S. forces. Actually, over the next five years, the Germans will pay slightly more than 50 percent of the costs; after this initial implementation period, the Germans will pay about 60 percent of the steady-state annual recurring costs, representing a significant contribution and burdensharing commitment.

The report of the FY 1983 Continuing Resolution Conferees indicated that the WHNS agreement should be considered as a part of the foreign military aid budget. If this statement is correct, Germany, not the U.S., should place its funds in a foreign military aid account, because it is U.S. troops who get the support. Also, unlike a foreign military sales program, the United States retains title to all equipment procured for use by Bundeswehr reservists in support of U.S. forces in Europe.

This agreement represents a breakthrough in our efforts to persuade our allies to assume a larger share of the NATO defense burden; because, up until now, one of NATO's basic principles has been that "logistics is a national responsibility." If Congress supports this program, we expect that our other NATO allies will become increasingly receptive to the concept of providing essential in-theater logistics support to U.S. forces in wartime.

But this will only happen if the United States keeps its part of the bargain. Germany has set aside nearly eighteen million dollars to pay its share of implementation costs for 1983. We anticipate that Germany will double its contribution to the program in 1984. Germany has reaffirmed its commitment despite the fact that we failed to keep our part of the bargain in 1983. It now is up to us to do our part in support of this critical program.

President Reagan's FY 1984 budget request includes forty-one million dollars to pay the U.S. share of costs in 1984 for the Wartime Host Nation support program.

European Troop Levels

The Congressional ceiling on the number of U.S. military personnel that can be permanently stationed ashore at the end of FY 1983 required DoD to reduce its planned European strength by about 5,200 people. The increases originally planned for FY 1983 were improvements to the capability and readiness of our deployed forces. Some of the planned FY 1984 increases are to support the deployment of GLCM and Patriot, increase the manning of aircraft squadrons, convert intelligence units to the more capable CEWI organization, and increase the strengths of combat service support units, which will decrease the shortfall in logistical capabilities. Their loss or alternative reductions will weaken deterrence.

The Joint Chiefs of Staff studied what adjustments we needed to make in our European manning plans to meet the FY 1983 ceiling. Since the Congressionally mandated FY 1983 ceiling was imposed well into the fiscal year, major programmatic changes to European force structure could not be implemented in time to effect the end strength on 30 September 1983. Furthermore, FY 1983 funds are not budgeted for unit relocation from Europe or civilianization of military positions using local nationals. Accordingly, the Secretary of Defense approved the recommendation to adjust European manning levels and not cut spaces in FY 1983. This recommendation afforded the Military Departments maximum flexibility to manage the reduction of the U.S. presence in Europe, while at the same time minimizing the personnel and unit turbulence associated with this reduction. Finally as you know, the President elected to exercise his waiver authority to allow for the deployment of GLCM in FY 1983. With this waiver we will meet the Congressional ceiling for FY 1983 in Europe.

We understand your concern and are taking actions to be responsive on the one hand while ensuring we do not undercut the U.S. defense interest in the NATO area. The Joint Chiefs of Staff have recently completed and the Secretary of Defense approved a review of the European program which resulted in a cut of about 3,800 spaces from that which we originally programmed in the FY 1984 Budget. Our current plan for FY 1984 is to have deployed 322,500 ashore forces in Europe which includes 2,600 for GLCM.

The Secretary of Defense, the Joint Chiefs of Staff, and I strongly urge the Congress not to set a European strength ceiling for FY 1984. We will continue to work to keep the number of military people in Europe to a minimum consistent with our need to have a strong deterrent partnership with our allies. We plan each year in our Manpower Requirements Report to inform the Congress of our plans for European strength. Rather than impose arbitrary ceilings we would hope the Congress review that report and, if it feels it necessary, to question the Services on their plans for European strength.

Training

Three other issues—all concerning training— have serious implications for our ability to carry out our obligations as a member of NATO. The first two issues involve charges to the Allies for training provided by the United States:

- According to NATO practice, which is embodied in a NATO Standardization Agreement (STANAG 6002), charges for training provided to a second nation should include only the marginal costs attributable to the second nation's students. U.S. law requires us to charge higher prices that include elements of fixed cost. The Department of Defense strongly favors legislation that would allow us to ratify STANAG 6002 without reservation.
- General Provisions in the Defense Appropriation Acts for FY 1981 and 1982, and again in force for FY 1983, require us to charge full costs for military students who require hospitalization in DoD facilities while in training in the United States. Our longstanding practice, which was consistent with the NATO Status of Forces Agreement of 1951 and STANAG 6002, had been to charge only the fees we charge U.S. personnel. We again are requesting that this provision be deleted.

These two provisions are continuing obstacles to expanded allied use of U.S. training resources and, consequently, to good training for people we rely on to fight side-by-side with our forces. They also are continuing irritants in Alliance relations. We ask the Congress for relief on both provisions.

The third issue is the persistent, large, Congressional reductions in the appropriation Claims, Defense. These reductions are aimed specifically at funds used by the Army to pay claims for damages caused by U.S. forces during field maneuvers in Germany. It is important to recognize that:

- Due to the extreme scarcity of dedicated training space in Germany, maneuver training of units above company size must take place in the civilian countryside.
- These maneuvers are absolutely necessary to maintain readiness.
- Even operating under stringent rules, armored units are going to cause some damage.
- Under the NATO Status of Forces Agreement, the nation doing damage is liable for the resulting claims.

Congressional reductions in claims funds threaten not only our ability to make payments in accordance with our treaty obligations but put our ability to train adequately at risk, thereby decreasing our force readiness and capability.

VIII. SUPPORT REQUESTED FROM CONGRESS

Strength Levels

The Department requests authorization of active and reserve military and civilian manpower for FY 1984 and FY 1985 at the levels shown in the following table. Actual FY 1982 and planned FY 1983 strengths are shown for comparison.

Table 21
DEFENSE MANPOWER 1/
(000s)

	Actual	FY 1984 Budget		Request	Difference
	FY 1982	FY 1983 2/	FY 1984	FY 1985	FY 1982-FY 1984
Active Military	2,108.6	2,127.4	2,164.7	2,213.0	56.1 (2.7%)
Selected Reserve	931.7	991.5	1,014.0	1,047.2	82.3 (8.8%)
Civilian	1,029.9	1,056.2 3/	1,072.2 3/	1,080.9 3/	42.3 (4.1%)

1/ End of fiscal year strengths for active military and civilian; average strengths for Selected Reserve.
2/ FY 1983 Authorization Act (P.L. 97-252) authorized 2,130.0 active military, 977.0 Selected Reserve, and 1,050.1 civilian.
3/ Does not reflect anticipated conversions to contract.

Active Forces. The following table shows actual FY 1982 and planned FY 1983 and FY 1984 active military strength by Service:

Table 22
ACTIVE MILITARY MANPOWER
(End-FY Strength in 000's)

	Actual	FY 1984 Budget	
	FY 1982	FY 1983	FY 1984
Army	780.4	780.0	782.6
Navy	553.0	560.3	572.6
Marine Corps	192.4	194.6	197.3
Air Force	582.8	592.5	612.6
TOTAL	2,108.6	2,127.4	2,164.7

Guard and Reserve. The requested average strength for FY 1984 for the Selected Reserve is shown by component in table 23.

Table 23
SELECTED RESERVE STRENGTHS BY COMPONENT
(Average-FY Strength in 000's)

	Actual	FY 1984 Budget	
Component	FY 1982	FY 1983	FY 1984
Army National Guard	399.3	415.7	418.4
Army Reserve	243.0	262.6	270.7
Naval Reserve	89.3	105.5	112.6
Marine Corps Reserve	38.0	40.2	40.3
Air National Guard	99.2	101.5	103.4
Air Force Reserve	63.0	66.0	68.6
TOTAL	931.7	991.5	1,014.0

Both active and Reserve component manning increase by about two percent between 1983 and 1984 as we continue to improve the readiness and combat capability of our forces. Our policy is to maintain as small an active peacetime force as national security policy and our military strategy will permit. Active military people are employed only in those jobs which require immediate readinesss for combat operations or combat support and the training and rotation base that supports our force. We are substantially increasing our reliance on Reserve component units for more and more complex missions. Reserve units have demonstrated their capability to maintain high readiness levels and we will continue to improve their manning and equipment.

The Army end strength will increase in FY 1984 by only 2,600, but this masks an increase in force structure spaces of about 8,200 resulting from a significant drop in the number of students and trainees required to support the force. The increase in force structure will allow the Army to convert its heavy divisions to the more robust Division 86 structure and its intelligence units to the more capable Combat Electronic Warfare and Intelligence (CEWI) organization, and to activate an additional Special Forces Group to improve its unconventional warfare capability.

Most of the increases in Navy active manpower are to man new units being added to our growing fleet. The battle force will increase by 20 ships in 1984 and a new aircraft wing will be formed for USS CARL VINSON (CVN-70). Increases in the fleet bring additional requirements for support. Naval Reserve increases are for fleet units and support units, with particular growth in the Reserve frigate program and in Reserve medical support units.

The increases in active and Reserve Marine manpower reflect both new equipment (light armored vehicle, TOW missile) and increased manning of active and reserve combat support units. This will improve the sustainability of our Marine air-ground task force.

Air Force active military strength increases are largely the result of growth in the numbers of tactical aircraft, the Ground Launched Cruise Missile Program, and associated maintenance requirements. USAFR increases reflect the continued modernization and expansion of its Tactical Fighter Force, including the increases in A-10, F-4 and KC-10 aircraft and introduction of the F-16. ANGUS increases are the result of the addition of fourteen F-4 and six F-16 aircraft.

Civilians

Total estimated DoD civilian employment in FY 1983 is programmed to rise by about 2.5 percent over FY 1982. This is the third year of increases after a long period of decline. Somewhat higher civilian employment is planned for FY 1984. The growth in civilian levels is needed to support the increased readiness and sustainability objectives of this Administration.

Military Student Training Loads

"Student loads" are the average number of military students and trainees of each Service and component enrolled in formal schools of the Military Services for training and education during a given year. Student loads requested for FY 1984 and 1985 are shown in the following table. The details of these training and education programs are explained in the Military Manpower Training Report for FY 1984.

Table 24

REQUESTED MILITARY TRAINING STUDENT LOADS

Active Forces	FY 1984	FY 1985
Army	71,817	77,365
Navy	66,911	67,987
Marine Corps	21,105	21,185
Air Force	49,007	53,283
Subtotal	208,840	219,820
Reserve Components		
Army National Guard	21,105	20,134
Army Reserve	12,724	11,605
Naval Reserve	2,886	2,967
Marine Corps Reserve	3,223	3,223
Air National Guard	2,845	2,843
Air Force Reserve	1,705	1,751
Subtotal	44,488	42,523
TOTAL DoD	253,328	262,343

Legislative Proposals

In addition to the strengths and training loads requested above, I strongly urge the Congress to support the Department's legislative initiatives.

- The extension of the military service obligation from six to eight years and the IRR bonuses are needed to overcome our wartime military manpower shortfall.
- Early passage of legislation to block the transfer of the Department of Defense Dependents Schools to the Department of Education will reduce worries of military families about their dependents' education.
- NATO legislative initiatives under consideration--POMCUS, WHNS, European troop levels, training charges and maneuver claims--are important both to our agreements with our allies and to the ability of our troops to fight a NATO war.
- The extension of the delimiting date on the GI bill will remove the incentive for a service member to leave the Service to use his/her GI bill entitlements. The Department does not support enactment of a new GI bill this year.
- The removal of aptitude and educational quality restrictions on new enlistees will give us management flexibility as we man the force in future years from a declining manpower pool.
- Two legislative packages to reform the laws governing general and flag officer grades were submitted by the Department during the 97th Congress. The first submission was a bill "To eliminate general or flag officer grade requirements from certain statutory positions, and for other purposes." Hearings were held on that bill by the Subcommittee on Manpower and Pesonnel, Senate Armed Services Committee (SASC). The result became S. 1906 which was referred to the full Committee where it was reported out; however, it never came to a vote during the 97th Congress. The second package, submitted on March 24, 1982, was a bill "To amend Title 10, United States Code, to revise and standardize the provisions of law relating to the distribution, appointment and assignment of flag and general officers of the Army, Navy, Air Force and Marine Corps." Due to the press of more important matters, the SASC Subcommitte on Manpower and Personnel was unable to schedule hearings before the adjournment of the 97th Congress. We have resubmitted both of these packages for consideration by the 98th Congress. The first bill is carried on our schedule as DoD 98-51 and the latter bill is carried as DoD 98-62. We encourage Congress to take up these two important pieces of legislation as early as practicable and we urge their passage.

IX. CONCLUSION

This manpower program is designed to promote the most efficient utilization of our active duty, reserve, and civilian personnel. It is firmly based on the President's assessment of our national security needs, and it balances our obligation to the nation's taxpayers and to our military and civilian members. We welcome the Congress' careful scrutiny of our program and are confident that, working together, we will continue the fine progress recently begun in addressing defense manpower needs.

MANPOWER COSTS 60 PERCENT OF DEFENSE BUDGET

Senator Stevens. Thank your very much, Dr. Korb.

I think we have to get this problem in focus, however, and your last comments highlight that focus. As I said, we have to absorb that 4 percent. It was not budgeted, and it is presumed to be off budget as far as the bill that is on the floor is concerned. So we are going to absorb it.

Sixty percent of the defense costs now are manpower, and we have had since 1980 a 50-percent increase in the basic costs of manpower, that is the basic pay and allowances, since 1980. We have absorbed most of that. About 13 percent real growth has been absorbed in our budget as we have tried to fund the requests of the whole Department through this subcommittee.

DEFENSE EFFORTS TO HOLD DOWN MANPOWER COSTS

As I indicated before, we do not see that the Department is doing anything to hold down the costs of manpower.

Can you tell us, what do you think the Department is doing to hold down the cost of manpower?

Dr. Korb. First of all, Mr. Chairman, I would like to make a couple of comments on the percentage of Defense budget that goes to manpower. By our calculations of the President's fiscal year 1984 budget, the percentage of Defense outlays going to manpower is about 42 percent.

Senator Stevens. The Secretary had testified 60 percent. That was his statement to us. I suggest that you find that statement and give us for the record a clarification, because I am going to have to face that on the floor. That was his statement.

Now, if you say it is less than 50 percent, that is good news, but we still have to know exactly.

[The information follows:]

Manpower Costs as a Percent of the Budget

Although there are many variables which can be considered as manpower costs, we believe the most accurate and commonly utilized portrayal of those costs is depicted below:

Defense manpower costs—fiscal year 1984 [1]

[Outlays in billions of dollars]

Defense outlays	238.6
Manpower outlays:	
Military personel appropriation	42.6
Defense family housing costs [2]	2.6
Military retired pay appropriation [3]	16.8
Reserve and Guard personnel appropriations	5.1
Civilian costs [4]	26.7
Direct manpower costs	93.7

Personnel support costs [5]	6.9
Total manpower costs	100.7
Percent of defense outlays	42

[1] Excludes civil functions, NSA, and special programs for disadvantaged youth.

[2] Excludes civilian pay portion of this appropriation which is included under civilian costs.

[3] For those already retired. Future retirement costs for current members are not currently reflected in the budget.

[4] The cost of civilians is budgeted under the functional appropriations, for example, operations and maintenance, family housing, RDT&E. Often indirect hire civilians are excluded from manpower costs and strength data.

[5] Excludes the pay of military and civilian personnel, since they are accounted for separately. Includes costs of individual training, medical support recruiting and examining overseas dependent education, half of base operating support, and a miscellaneous category. The fiscal year 1984 personnel support costs are preliminary estimates.

ITEMS IN MANPOWER COSTS

Senator Stevens. Did you calculate the 4-percent increase we have to absorb this year?

Dr. Korb. No, I did not.

Senator Stevens. Did you calculate the increase last year that was given that was more than the President's request?

Dr. Korb. Yes, sir. Last year it was approximately 46 percent of the budget that went to manpower costs.

Senator Stevens. What do you include in the manpower costs, basic pay and all allowances, subsistence, and transportation?

Dr. Korb. Family housing costs are also calculated in that. In fact, if we take out some of the personnel support costs, we are under 40 percent.

Senator Stevens. Sell, that is one of our problems in trying to defend the budget when it gets to the floor. I will run into the statement that the Secretary said personnel costs are 60 percent. Now, you say that they are less than 50.

Is the retired pay involved in personnel costs?

Dr. Korb. Yes sir, retired pay is involved. Our total manpower budget, for example, just direct costs, is about $94 billion. If you add personnel support costs, that gives you another $7 billion. So you are about $7 billion out of our budget requests.

Senator Stevens. Are you looking at your original budget request or the budget request that is the budget that we have now agreed upon in terms of the congressional budget?

Dr. Korb. I am looking at the President's——

Senator Stevens. The President himself cut that $10 billion.

Did you take that out?

Dr. Korb. Yes, I did.

Senator Stevens. That was not manpower at all. The cuts that have been made are not related to manpower.

Dr. Korb. No, sir, those were not manpower costs except for the fact that you calculate in that there was no pay raise.

Senator Stevens. But that is unrealistic, as you said yourself, and you asked us to appropriate the money, but you do not add into your figures when you give them to me.

Dr. Korb. No, sir. The President did not ask for an appropriation——

Senator Stevens. Now, you just asked me to be sure that this subcommittee appropriated the money for the 4 percent.

Dr. Korb. Yes, if Congress, if the pay raise is authorized, we have asked you to appropriate the money.

Senator Stevens. It is not in your budget, but it is in ours, and we must absorb it in the allocation of this subcommittee. We have been told to fund the 4 percent.

Dr. Korb. Mr. Chairman, on the whole question of manpower costs, because this is a question that is constantly brought up at home and abroad, if we go back and we take the pay of an active duty person in 1964 and we discount for inflation, it is just about the same. We can provide those figures for the record.

Senator Stevens. I would like to have those because our figures show a per capita 13 percent real growth since 1980 alone.

Military Pay Increases

From 1964 through 1982, career military personnel have received an average cumulative pay increase of 242 percent compared to a cumulative increase in the Consumer Price Index (CPI) of approximately 215 percent over the same period, a real increase of less than 9 percent, or about one-half of one percent per year. This real growth in pay is modest indeed when one considers that it has occurred over a period of approximately 20 years. While there has been a cumulative 291 percent increase in pay of all personnel since 1964, most of this real growth occurred in 1971 as a result of the pay increase received by first term enlisted personnel in transitioning to the All-Volunteer Force. Except for an increase in the quarters allowance, the career force did not share in that pay increase. It is simply not true, therefore, that real increases in military pay have created inflated and unjustified manpower costs. Further, since 1972, military pay has lagged significantly behind inflation, and the shortfall will grow to 15 percent assuming no pay increase in fiscal year 1984. The increase in real military pay since 1980 is a result of the substantial increases in 1980 and 1981 which were required to make up for the severe erosion which had occurred in military pay between 1972–1980, to correct the alarming recruiting and retention problems of the late 1970's, and to support increases in the size of the military force.

QUALITY OF LIFE INCREASES

Dr. Korb. Again, I will provide for the record and will provide it to our NATO allies because they are saying that we talk about a fair sharing of the defense burden, and we go back to 1964, if you look at the pay, compared to that period of time, you will find that it is substantially flat. What has increased in the personnel account—and I make no apologies for this—are what we would call quality of life expenditures for family housing, for example, these indirect costs. But the basic pay is still the same as it was in 1964.

Senator Stevens. Well, Mr. Secretary, I carry along with me, because I get into so many arguments as chairman of this committee, I carry along a little card. I will tell you what my little card tells me as the answer to that because I have trouble about that, too.

We show that since 1970 wage increases for the military have been 172.5 percent, for the private sector 139 percent, for Federal civilians, 118 percent. In terms of the difference between Federal employees and military, you just have to look at 1981. The increase, as I recall it, was 15 percent.

Senator Stevens. Others in Government got 4.8 percent. The military has had a real increase in salary since this administration came in.

Dr. Korb. That is correct, and again, you can change the year, but if you go back to 1972, for example, and compare military pay now to what we call the professional, administrative, technical, and clerical index, you will find that relative to that, military pay is 11.7 percentage points behind. If you use the employment cost index, it is 9.3 percent behind. And if you use the CPI, it is 15.3 percent behind.

Senator **Stevens**. I challenge that because the CPI since 1970 has increased 164 percent and military pay has increased 172.5 percent. You are ahead of the CPI.

Dr. **Korb**. No, not by my calculations, Mr. Chairman.

Senator **Stevens**. Well, I suggest you go to the Department of Labor and get them because that is where I got them.

Dr. **Korb**. Well, by our calculations, since 1972, the cumulative increase in the CPI is 150.2, and the military increase is 100 to 112. But I would be very happy to go back and check these.

Senator **Stevens**. I suggest you do it because these are some of the figures we checked out with your people last year to make sure I had the right answers because people jumped me about these questions as we went along.

Dr. **Korb**. Well, Mr. Chairman, measured from October to October, beginning in 1972 up through 1983, we find that the CPI acumulative increase is 150.2. The cumulative military increase, as I mentioned, is 112.

END STRENGTHS FOR U.S. TROOPS IN EUROPE

Senator **Stevens**. All right, let's get on to some of the things that I want to talk about here to see if we can get some answers to what we are doing.

You gave us a letter to the Senate on June 23 in which you state the minimum requirements for U.S. troops permanently assigned in Europe for fiscal year 1984 would be 322,500. That is an increase in the end strength of 5,500.

What went into that? How did you reach the increase of 5,500?

Dr. **Korb**. Chairman, if you want to go over this, we can give it to you by detail exactly. About 1,200 of the growth is for GLCM. In addition, the Army has spaces to convert their heavy divisions to the Division 86 structure, which increases the manning of these units. It deploys eight Patriot air defense batteries plus other modernizations to Europe.

In addition to GLCM, the Air Force introduces the F-111's and TR-1's and converts F-4's to F-16's and provides the necessary support and manpower to handle the additional preposition equipment, and adds spaces for an intertheater aircraft spares distribution system that will be essential to permit us to support planned wartime sortie levels, and improved medical, intelligence, command and control, and electronic warfare countermeasures programs. The Navy adds a nominal number of forces to support fleet operations and aircraft maintenance.

We can provide a detailed breakdown of each of those things for you.

Senator **Stevens**. We would like to have that for the record.

[The information follows:]

EUROPEAN TROOP STRENGTH

(The information referred to follows:)

The growth by function by Service from FY 83 to FY 84 is as follows:

Army

FY 83 column of FY 84 President's Budget		217,248
Transition to Division 86	+1,500	
Increased manning levels	+2,259	
TOE changes and Force Modernization	+300	
Base operations support	+200	
PATRIOT deployments	+700	
Inactivation 4th Bde, 4th Mech Division	-3,900	
Unit strength reductions to free needed spaces	-500	
Cancellation of USAREUR growth	-179	
Elimination 2 Mil. Intelligence companies	-134	
Reduced Equal Opportunity, Drug and Alcohol Abuse Programs	-275	
Unallocated strength adjustment	-563	
FY 84 revised strength		216,656

Air Force

FY 83 column of FY 84 President's Budget		88,623
GLCM	+1,193	
TR-1/Tactical Cryptol Program	+365	
Force structure	+564	
AMMR/Supply	-115	
Prepositioned Procurement Package	+211	
Co-located Operating Base	+97	
European Distribution System	+338	
Medical/Intelligence	+318	
Chem/Bio Defense	+125	
Command, Control, Commo Countermeasures/Crypto	+313	
NATO AWACS	+54	
All Other	+16	
Red Horse	-450	
Bare Base Proc.	-243	
ASRT	-42	
Loran	-74	
CV-10	-718	
EOT/MR/Drug Abuse	-101	
MAC/AFCC/ESC	-388	
Unallocated strength adjustment	-308	
FY 84 revised strength		89,778

Navy/Marine Corps

FY 83 column of FY 84 President's Budget		15,631
Aircraft Intermediate Maintenance	+71	
Electronic/Cryptologic support	+41	

Intelligence	+33	
Communications	+51	
Medical	+34	
International Military Organizations	+20	
Mine Warfare and Explosive Ordnance Disposal	+15	
Other fleet support	+117	
Marine Guards and Security Forces	+3	
	+385	
FY 84 revised strength		16,016
SUMMARY FY 84 REVISED STRENGTH		322,450

In addition to each of the above strength changes each of the Services was directed to underman their planned European forces in FY 83 so as to remain within the European troop strength constraint. The Army undermanned its force by 2,948 people, the Air Force by 1,423, and the Navy/Marine Corps by 231. Thus the growth in structure spaces in each of the Services was less than it appears to be and in fact the Army structure in Europe will decrease from FY 83 to FY 84.

CEILINGS ON TROOP ESTIMATES

Senator **Stevens**. Now, I am told troop estimate was finalized last month. If that is correct, does the 1984 budget request of the Department include the numbers that you have given us?

Dr. **Korb**. Mr. Chairman, because of the actions of this committee last year, you put the ceiling on us of approximately 315,000 people. We then asked the Joint Chiefs of Staff, in conjunction with the European Command, to determine how best to live within that ceiling and what the minimum essential strength would be in 1984. They came in and said the minimum essential strength was 322,450. We had originally programed 326,300 at the end of 1984.

So that is the source of those two numbers. The increase, as I mentioned, between 1983 and 1984 was essentially for the areas that I gave you, the largest of which was the projected deployment of the ground-launched cruise missile system.

I also would like to point out that because of congressional action, we have gotten the number down for 1983 above the number which we had originally protected at the beginning of the year.

Senator **Stevens**. I do not understand your last statement when you say you have the numbers down above?

Dr. **Korb**. In other words, before you put the ceiling on us, we had intended to have more troops in Europe at the end of fiscal year 1983 than the 315,600. At the end of the year we will have the 315,600 plus the 1,380 spaces waived by the President for the ground-launched cruise missile.

AIR FORCE PERSONNEL REQUIREMENTS

Senator **Stevens**. Well, I will go into that in a minute.

The Air Force has stated to us its minimum requirement for fiscal year 1984 for troops in Europe is 92,100; the Army, 216,600; the Navy and Marines, 15,200. That totals 324,100.

Are you familiar with those numbers and if so, how do we accommodate those to the numbers you have just given us?

This, incidentally, came to us in a letter of July 15, and it was from your office stating end strength numbers. We cannot quite accommodate them with what you have just said, that letter indicates that the authorized end strengths are Army, 216,656; Navy, 16,016; and Air Force, 89,000, and the Air Force notified us on July 15, that that went up to 92,000. But as of July this year, just a few days ago, you distributed a memorandum to all departments, military departments, indicating end strength levels.

Now, how does that comply with what you have just told us?

Dr. **Korb**. Well, the services would like to go up, with no congressional ceiling, to about 326,000. We told them to plan—this is for fiscal year 1984, now—on no more than 322,450. So we have made them adjust their strength downward, the difference between 326,000 and 322,000.

Now, the Air Force is telling you that that is what they feel is the minimum number required. What we have told the Air Force is they cannot go that high because of what we anticipate is the likelihood of congressional action.

Senator **Stevens**. The Air Force says it wants 92,100.

Dr. **Korb.** I am telling them they cannot have more than 89,778, to please begin making the adjustments.

Senator **Stevens.** Included in this is the 1,380 spaces that were to accommodate GLCM and the President's request for the increase in the ceiling?

Dr. **Korb.** Mr. Chairman, we are talking about 2 different fiscal years here.

Senator **Stevens.** I understand that, but I want to know if you carried that over to the next year.

Dr. **Korb.** Yes; we did. The Air Force total includes 2,600 spaces for GLCM by 1984.

MANPOWER FOR GLCM

Senator **Stevens.** What is going to be the requirement for Pershing II and GLCM for 1984?

Dr. **Korb.** I can give you the exact numbers on that in a second.

Senator **Stevens.** Do you have the same figures for 1985?

Dr. **Korb.** I can supply those for the record. Some of our outyear projections may be classified, Mr. Chairman.

[The information follows:]

GLCM Manpower

The total manpower required for GLCM in fiscal year 1983 is 1,380; in fiscal year 1984, 2,598; in fiscal year 1985, 4,658. There is essentially no additional manpower associated with Pershing II above that which is currently needed to operate and maintain Pershing I.

ADMINISTRATION CERTIFICATION OF INCREASE

Senator **Stevens.** Are there any classified increases over the ceilings that we do not know about?

Dr. **Korb.** Not in 1983 or 1984, sir.

Senator **Stevens.** If we put the 2,600 in for the INF requirements, that would increase our manpower, according to our figures, to 318,200. Your request is for 7,000 spaces in the budget. That is what you have said here again today.

Dr. **Korb.** Well, again, we are changing different bases here. If we take the base of 315,600 which is the 1983 ceiling, we have determined on the basis of a JCS study that the minimum essential strength would be 322,450. However, the 315,600 figure does not include the Presidential waiver of 1,380 spaces for GLCM.

Senator **Stevens.** Did the President certify that increase?

Dr. **Korb.** The President has to certify the increase for 1983 but not for 1984, because we do not know if we are going to have a ceiling yet for 1984. You see, you have only enacted a ceiling for 1983. There is no final action taken for 1984.

Senator **Stevens.** And you take the position that we have to reenact that ceiling every year?

Dr. **Korb.** I would say so because of the way I read the legislation, Mr. Chairman. I think the legislation specifically applied to only 1 year.

Senator **Stevens.** Is there going to be any attempt by the Department to absorb the manpower increases that are associated with the new systems that you described previously?

Dr. **Korb**. Well, we partially have. As I said, if we were not constrained by a ceiling, we would have expected that at the end of fiscal year 1984 we would have had over 326,000 people in Europe. We have now scrubbed that, and we are down to 322,000. So, in effect we have taken out approximately 4,000 spaces.

END STRENGTH INCREASE IN EUROPE

Senator **Stevens**. It is our understanding from the bill on the floor that the authorization for Europe is 315,600, but with the discretion to the Secretary to increase the figure you just mentioned, the 322,000 figure.

Do I understand from your statement that it is your intention, the Department's intention, to allow that to go up to this end strength number that is in your July 15 letter, to the 322,450 for 1984?

Dr. **Korb**. We have requested, or rather, we have told the Congress that we would like 326,300 people. Based upon the action taken so far by the authorization committee, it looks like the ceiling will be roughly 320,000 plus the 2,600 for GLCM, and so that is what we are telling them to plan on.

Remember, Mr. Chairman, we are talking about a date that is about 15 months away from now. We are beginning to plan. What we have told the services is to begin cutting down the number of people. If the Congress should tell us to do something differently, obviously we would accommodate it. But this is a planning factor by the end of fiscal year 1984, which is about 15 months from now.

Senator **Stevens**. So, the changes come about as the F-4's go out and the 16's come in, we have a manpower increase, and yet the planes were justified to this committee as being more efficient and more high tech and more capable of being maintained at less cost.

I really do not understand how we have continual manpower increases when we have more sophisticated weapons systems replacing those that have been in Europe for some time.

Is the Department doing anything to require the military departments to live within the ceiling, or are we just going to face an annual request that we increase the ceiling and have the ceiling be meaningless?

Dr. **Korb**. Mr. Chairman, as I mentioned, we have told the departments to get down from their originally projected number. The numbers, for example, that the Air Force has furnished you, we have told them to cut those numbers down. Depending on how they will accommodate them, they may now have to come back to us.

On the specific point that you mentioned, about a coversion from the F-4 to the F-16, when you put in a new weapons system initially, you need more manpower to accomplish the transition. However, you do not leave it there forever.

Senator **Stevens**. Well, you have said in your statement the signal sent to our NATO allies for the 1983 troop ceiling was very damaging. It weakens our force capability, damages our ability to negotiate greater contributions on the part of the allies. I note that after our signal, the allies failed to meet their own goal of 3 percent real growth. They failed that in every year since 1979. The 1982 increase was 1.6 percent.

Do you think that the ceiling that we put on in 1982 damaged the allies to the extent that they are not willing to come up with their own manpower goals?

Dr. Korb. Well, you are talking about a budget increase as opposed to a manpower increase.

EDUCTION IN BRITISH TROOP LEVELS

Senator Stevens. Well, we were in Britain, this subcommittee was in Britain, the day that the British withdrew their troop levels down to 55,000 troops in 1982. There were not a thing said about it in the British papers or these papers at all. Our own news media missed it entirely.

Are you saying that it was the action of this subcommittee in limiting our forces that led them to withdraw theirs?

Dr. Korb. No, sir, I am not. What I am talking about is in the overall context of the signals that we send. We do not view this as a helpful thing. We think that if we increase ours or keep ours the same, it is easier for us then to get our allies to do more. But if we are cutting back, it becomes more difficult for us to tell them not to cut back.

Senator Stevens. Well, if just so happens in the last 5 years, as they have withdrawn their troops, particularly the central European nations, we have added to ours, and it just so happens that the decrease of 7,000 of last year from the NATO allies is met by the 7,000 increase of this year from the Department of Defense.

Now, why is it we should constantly continue to increase our force levels when they constantly decrease theirs?

Dr. Korb. Mr. Chairman, I share your concern, but I think what we have to take a look at——

Senator Stevens. Do you agree with me that they have decreased their force levels?

Dr. Korb. Well, it depends on the date you compare it to. If you go back a decade, you will find out that we have decreased more than they have in overall manpower. The decrease in our allies' military manpower during the 1970's can be attributed almost entirely to the demobilization of the Portuguese Armed Forces in 1975 following their withdrawal form Angola. Since 1975, Allied strength has increased. We expect the final data for 1982 to show an increase of 36,000 over 1981.

Senator Stevens. It is interesting, but I go back to Eisenhower, and Eisenhower committed not quite three divisions.

How many divisions do we have over there now?

Dr. Korb. On the ground we have four divisions.

Senator Stevens. As a matter of fact, we never stated our commitments. The British pointed out to me that they had stated categorically, in an act of the Parliament or something approved by the Prime Minister that their force level was 55,000 in a commitment to NATO. We have never made such commitment, have we?

Dr. Korb. Not that I know of, except that in our response to the annual NATO defense questionnaire we do commit in terms of the numbers of divisions, brigades, ships and air squadrons.

Senator Stevens. A congressionally approved commitment?

Dr. Korb. No, sir.

PERMANENT TROOP COMMITMENTS IN EUROPE

Senator **Stevens**. Maybe we ought to explore that and find out and ask the country to decide how many troops are we going to commit to Europe on a permanent basis.

Dr. **Korb**. I think that is certainly a question that the Congress should debate and the American people should be informed on.

I would like to make a point about the drop. If you take a look, for example, at the period you mentioned, there was a drop of about, for example, 65,000 most of it is attributed to Portugal which, as you know, has had a change in its government. They have reduced their military substantially. For example, in 1974 they had 282,400 in their military, and they are now down to 90,000 people. A lot of that took place as a result of the demobilization, when the Portuguese Armed Forces withdrew from Angola.

Senator **Stevens**. Senator Inouye has some questions, and I would like to give him the opportunity to ask them.

I am sorry, Senator, for taking so much time.

Senator **Inouye**. Thank you very much, Mr. Chairman.

The chairman of this committee is very meticulous and careful, and he has a whole booklet of questions for you. The ones I will ask very likely will not be included in that comprehensive list.

ALL-VOLUNTEER ARMY

I have been long concerned about the Volunteer Army. I note in your statement that 96 percent of our combat arms NCO's have high school diplomas.

Dr. **Korb**. That is correct.

Senator **Inouye**. Do we still divide manpower into separate categories of intelligence or intellect?

Dr. **Korb**. Well, the Army has what they call military occupation specialties, by which they put people into various branches. The main divisions would be the combat arms, which is primarily armor, artillery, and infantry. Then you have combat support in which you have things like intelligence and engineering, and combat service support, which is much more the logistics area.

MENTAL CATEGORIES

Senator **Inouye**. I was told that a few years ago we had five categories. Category 1 was——

Dr. **Korb**. Oh, you are taking about mental categories.

We, we have what are mistakenly called mental categories. What they are is trainability categories. We do divide people into the five categories. We take nobody in category 5, the lowest category. The Congress has limited us to taking no more than 20 percent for any service in category 4, and right now we are taking only about 10 percent category 4, and the rest of our people come from what we call categories 1 through 3, which is average or above average scores on trainability tests.

Senator **Inouye**. What percent of our volunteers are in category 1?

Dr. **Korb**. I would say that in category 1—well, I will give you the exact figures right now for fiscal year 1983. We usually just break them down, 1, 2, and 3, but I know, for example, that categories 1 and 2 have over 40 percent right now of our volunteers. I think we may be even able to break it down further, but normally, because of the congressional action, we break it down 1, 2, 3, and then 4. But I do know, because General Tice and I were discussing this at one time, that it is now over 40 percent in categories 1 and 2, and that is college level material.

As General Tice says, it is 42 percent for categories 1 and 2.

MILITARY ENLISTMENTS/CIVILIAN UNEMPLOYMENT CORRELATION

Senator INOUYE. Is there any correlation between the rate of enlistment and the percentage of unemployment in our Nation?

Dr. KORB. Well, there obviously is a connection, but we are not quite sure how strong the connection is. For example, you have to keep in mind that teenage unemployment unfortunately is always higher than the rest of the population, and usually, when you go into a period of economic turndown, it is ahead of the rest of the population.

For the Army, their worst recruiting year was fiscal year 1980, and in fiscal year 1980, teenage unemployment, or unemployment among 17- to 21-year-old males was almost 16 percent, and yet the Army recruited roughly about 50 percent of the high school graduates, or 50 percent nonhigh school graduates, and 50 percent category 4's.

In 1981 and 1982, unemployment went up among that group. For example, in 1981 it went up to about 17½ percent, and right now it is about 20 percent. So it has gone up. But I do not think it has gone up enough to show the turnaround where the Army right now is recruiting almost 90 percent high school graduates and about 87 or 88 percent of the people are average or above average, or down to 13 percent in category 4's.

It obviously also has an impact on reenlistments. Reenlistments have gone up by about 15 or 16 percentage points since this administration has been office. Obviously, the unemployment has also gone up.

But here again you have to be careful because a lot of the people who we had trouble reenlisting and are now reenlisting are in skills which even in this economic situation are in very high demand in civilian society. For example, people in the electronic industry, because we are spending a lot of dollars on defense procurements, and our retention rates among those people are very high.

So yes, there is a connection, but I think there are a lot of other things going on, not the least of which is the congressional support for the military in terms of pay and quality of life, the President's leadership in this area, the attitude of the people in this country toward military service. As President Reagan has said so many times, it is now an honor to wear the uniform of the country again.

I think if you were to ask me my own opinion, that is the dominant thing in explaining the success of our manpower policies.

ENLISTMENT IN RESERVE FORCES

Senator INOUYE. I note in your testimony that the rate or enlistment in the Reserve Forces has gone up 19 percent.

Dr. KORB. The total manpower strength, yes, sir.

Senator INOUYE. What percentage of our spaces have been filled now?

Dr. KORB. Roughly, right now, the Active Forces are manned at about 90 percent of where we would like them to be for full time strength. The Reserve are at about 85 percent.

Senator INOUYE. Is it your intention to fill it up to 100 percent?

Dr. KORB. Well, we would like to within our budget constraints. That is the intention we are moving toward. Because of fiscal limitations, we have placed much more emphasis on the Reserves. Obviously, in the best of all possible worlds, we would like to have both the Active and Reserve manned at 100 percent.

Senator INOUYE. Mr. Secretary, I would like to submit for your consideration and response several questions relating to the sending of carrier task forces to Central America and how it would affect Navy personnel and rotation and so on.

Thank you very much.

Thank you, Mr. Chairman.

Senator STEVENS. Thank you, Senator Inouye.

MASTER RESTATIONING PLAN

Now let me get to this master restationing plan. When we were in Europe, we were briefed on the master restationing plan. At that time it involved giving up old bases and moving to new bases. We have now been informed that the old bases will not be given up, and they will continue to be occupied.

Is that right?

Dr. KORB. Right now we are at a critical juncture on the Master Restationing Plan. We would like to move to the new bases, because we need to improve our soldiers' living and working conditions. We do not want to put our soldiers in a base that does not make military sense, so we would like to move to new bases. We do not have the money right now because Congress has essentially said that unless the Germans share in the cost of this master restationing plan, we cannot undertake it. The German Government has said it will consider it, but they point out quite correctly that the Status of Forces Agreement does not oblige them to cost share. Right now we are in negotiations. In fact, this subject has been raised with the German Minister of Defense on his visit to the United States by the Secretary of Defense.

Senator STEVENS. All right. We will have a hearing later on that because if we do not have the answers, we do not have the answers.

PROGRAMED FORCE STRUCTURE IN EUROPE

The Army told this committee that we will maintain programed force structure in Europe for fiscal year 1983 at 217,300, but it will reduce its manning level to 214,300 to meet the congressional ceiling.

It appears that that will be a temporary reduction right at the end of the fiscal year, and then it will go right back up to 217,300, is that right? Are they just not going to send some people over, or is there going to be a temporary hiatus right there at the end of the fiscal year to meet the end of the fiscal year limitation?

Dr. KORB. Well, Mr. Chairman, I would hope not. The Secretary of Defense did not cut out spaces. He just told the services to adjust to meet the congressional ceiling. They have not told us how they will do it yet, but we waited for the recommendation of the Joint Chiefs of Staff on how best to do it.

The recommendation came in. The Secretary has told the services to get down to those levels, and as you quite correctly pointed out, that was the Army level. But then we will have to see what the Congress tells us to do for 1984. It would not make sense for the Army to go up if the ceiling stayed the same, but we are hopeful that Congress will lift the ceiling. But if they do not, at least give us a higher ceiling.

DEACTIVATION OF EUROPEAN BRIGADE

Senator STEVENS. Let me be specific about the European brigade. I do not need to repeat the history of the 1982 negotiations where the Department came up, the Department of Defense came up and said that it would deactivate the European brigade. the decision was made not to deactivate it, despite the budget which assumed that it was deactivated.

We now understand that the decision has been made to decrease Army manning instead of cutting units or limiting other increases.

Now, we are futher told that deactivation of the Wiesbaden brigade will take place in 1984, is that right?

Dr. KORB. That is correct, the so-called Fourth of the Fourth, the Fourth Brigade of the Fourth Mechanized Division.

Senator STEVENS. But that deactivation will not actually reduce manpower, it will in the final result increase costs and manpower because of the personnel shifts and the command changes that are involved, is that right? Will that deactivation actually increase manpower?

Dr. KORB. No, sir, unless you tie it to all of the other decisions.

Senator STEVENS. But we are tying it to the overall end strength of the Army.

Dr. KORB. I understand. The Army would like to increase its overall end strength in Europe for a number of reasons. As I mentioned before, one of them is the so-called transition to the Division 86 concept, which gives the Army a great deal of increased firepower for a limited increase in manning. But I would say if they did not inactivate the Fourth of the Fourth and continued what they were doing, the increase would be even more.

Senator STEVENS. Well, our examination in Europe last fall led me to the conclusion, I think the entire committee that was there, to the conclusion that the Army had been taking the force reductions. As a matter of fact, the Army has been taking the reductions to comply with the congressional limitation, but the Air Force has been increasing.

As Mr. Dyer points out, the Army apparently was taking decreases even before we sought the ceiling, and that while the Army was decreasing its unit manning, the Air Force has increased from 83,800 to 87,200.

Now, I tell you, I am really concerned about this because not only do we see that taking place, but now we find that while we decreased military—we did not decrease military forces.

CIVILIAN MANPOWER INCREASES

We stopped the rate of increase of military forces in Europe, they are still increasing even under our ceiling, the civilian manpower in Europe increased from 84,000 to 101,000 since 1980, and specifically, since we capped the manpower for the military forces in Europe, civilian manpower increased by 6,000, more than offsetting the intended reduction in costs in Europe.

Now, do you also keep track of civilian manpower?

Dr. **Korb**. Yes, sir, I do.

Senator **Stevens**. Are my figures right?

Dr. **Korb**. To the best of my knowledge, they are.

Senator **Stevens**. Well, is that what is happening? Are we dealing with a feather pillow? If we put a limitation on the military, do the civilians go up, and if we put a limitation on the civilians, the military goes up?

Dr. **Korb**. Well, first of all, you have to keep in mind, for example, what the civilians do. A lot of our civilians, for example, in Europe, which we count, work for the Department of Defense dependent school system. Because of the fact that we now have an older force, for example, the number of students in those schools is increasing.

Senator **Stevens**. You now have what?

Dr. **Korb**. We now have an older force, sir, because our retention is higher. So we have people now with more children. Because we have people with more children, there are more children in school, and our enrollment in our schools overseas, particularly in Europe, is increasing. Because of that, we need more teachers.

Senator **Stevens**. Let me tell you my analysis, just to see if you think I am wrong.

TOTAL U.S. PERSONNEL IN EUROPE

I came to the conclusion that the American taxpayers are supporting over 1 million people a day in Europe, over 325,000 military, over 300,000 civilians, and over 300,000 in-country civilians that are employed by the military, and that there has been, in the last years, a progressive increase in the number of people supported by the American taxpayer in Europe to the point that the U.S. military is the largest single employer in Central Europe.

Now, is that right or wrong?

Dr. **Korb**. I would say that your figures are essentially correct. I have no way of judging whether we are the largest single employer.

Senator **Stevens**. Do you not think that in time—and I am a real defender of NATO—do you not think that unless we stop this progression, the American public is going to grow weary of NATO?

Dr. **Korb**. Well, Mr. Chairman, I think the important thing to keep in mind is to look at it over time. Your figures are essentially correct. In the last couple of years we have been increasing, but that is because we had a decade where we neglected our defenses. During the war in Vietnam we took forces out of Europe, we took supplies out of Europe to fight that war while holding the defense budget down probably lower than it should have been.

Senator **Stevens**. Where did the British get their forces for the Falklands and their forces to deal with the Irish problems?

Dr. **Korb**. They took some of them from NATO.

Senator **Stevens**. I think NATO assumes that we will not be redundant enough to increase the forces in Europe at the same time we are increasing forces in Southeast Asia.

Dr. **Korb**. I understand that, but what we have done now is gone back and put those back. So if you take a look at it from the time when we had taken the forces out and you take a look at it now, it looks like an increase. But I think you have to look at it over time, and over a longer period of time.

Senator **Stevens**. But I am concerned. For instance, we have another request now for another new battleship. I am told it takes 1,500 people on each battleship, and the equivalent number ashore, so that we are looking at end strength increases coming about because of modernization. We have 14 new ships coming in, three naval squadrons coming in, and medical readiness problems.

Now, how can we increase force strength in Europe and at the same time man our new vessels at sea, even with the end strength requirements that you have listed?

Dr. **Korb**. But again, Mr. Chairman, I think it is important to keep in mind that the Army, which is the largest single presence in Europe, asked for a comparatively small end-strength increase this year. It is only about 600 people in Europe. The main majority of the increase, as you quite correctly point out, is for weapons systems that the Congress has approved 2, 3, or 4 years ago that are now coming into the force.

I think you are raising a very important point.

Senator **Stevens**. But we absorb manpower costs. Why can you not find a way to retire old units so that you absorb those new systems? When the F–4's came out and the F–16's went in, you increased manpower.

Dr. **Korb**. Again, as I pointed out, it is only a temporary increase. As you put in a new system, it takes a while to transition.

Senator **Stevens**. Would it be all right with you, then, if we just made this a temporary increase of whatever is the amount for GLCM and Pershing and said by the end of next year they are going to have to be down?

Dr. **Korb**. Well, obviously, if you leave GLCM and Pershing in, you are going to have to keep the people there.

What I am saying to you is, for example, if you take a look at the introduction of a new aircraft system, then after a period of years I would expect that you could get by with less people.

PERSONNEL INCREASES FOR PERSHING II SYSTEM

Senator **Stevens**. You had Pershing I; you are going to bring in Pershing II. You would have a temporary increase, obviously, in transition, but why would you end up with more people to maintain Pershing II than you had there permanently for Pershing I?

Dr. **Korb**. Because the decision, to the best of my knowledge, has not been made yet to phase out Pershing I. If and when that decision is made, then you may see a manpower decrease.

Senator **Stevens**. The total end-strength increase approved for the Department of Defense worldwide is probably going to be 7,000 people under the authorization bill, roughly 7,000, and you are projecting here more than a 7,000 increase in Europe.

Dr. **Korb**. Yes. Again, we are saying that we will be down to 315,000 plus the 1,380 for GLCM as you mandated us, by the end of fiscal year 1983.

Senator **Stevens**. That is just in 1 day, apparently, because the programs that have been brought to this committee indicate that the program strength level is maintained, the end strength for 1983 will be the ceiling, but the program strength level, it has been testified here, just goes right on and continues up.

Dr. **Korb**. We have requested for 1984, in the letter that I sent to the committee on July 15 and that I sent to the military departments, it said that the Joint Chiefs of Staff told us that the minimum essential number for 1984 is 322,500. So if you take the difference between 315,600 and 322,500, that is the difference.

Senator **Stevens**. It is a 7,000 increase.

Dr. **Korb**. No, sir, it is not a 7,000 increase because we have waived part of the increase in 1983 for GLCM. So you have to add that to the 315,600 number which gets it down.

Senator **Stevens**. Well, I asked you that question, whether it was included, and I assumed you were talking about the same numbers, the 7,000 total increase for next year.

Dr. **Korb**. No, sir.

Senator **Stevens**. Do you mean it is really what, an almost 9,000 increase?

Dr. **Korb**. No, sir, it would be the other way. In other words, it is 315,600 plus 1,380. The 322,500 number includes 2,600 for GLCM. So if we take GLCM out, the increase is a little bit above 5,000.

Senator **Stevens**. It is still a 7,000 increase over the ceiling.

Dr. **Korb**. That is correct.

TOTAL MANPOWER AUTHORIZATION INCREASE

Senator **Stevens**. But that is roughly equivalent to your end-strength increase in this authorization vote that I am going to go out and vote on in just a minute.

Dr. **Korb**. No, sir. Our total manpower authorization increase this year is about 37,000.

Senator **Stevens**. No; you are wrong. It is in the bill. It is 7,000.

Dr. **Korb**. Well, the Congress has cut us to that.

Senator **Stevens**. That is right. I am bound by that bill that is passing. I hope you are too.

Dr. **Korb**. Well, we certainly are.

Senator STEVENS. That is what I am asking you. You are saying 7,000 more for Europe, but I look at this, and I have got 14 new ships, 3 new Navy squadrons alone, and 2 more battleships that are coming on, plus another one they want to bring out, and it will require manning in what, 2 years. Where are they coming from? Where are the new people from the Navy coming from if you are going to put all of the authorized end strength increase in Europe?

Dr. KORB. Well, Mr. Chairman, if the bill passes in its present form—remember, the bill has not passed yet and it has not gone to conference——

Senator STEVENS. Hey, the House is lower than the Senate.

Dr. KORB. I understand that.

Senator STEVENS. So, as a compromise your increase will be about 7,000.

Dr. KORB. If that occurs, then obviously we will have to make some adjustments.

Senator STEVENS. But I thought that is what we were doing, looking at these things realistically right now, because I have to tell my staff what to do when we are on recess to mark up this bill consistent with what is going on, on the floor.

Dr. KORB. I understand.

REALISTIC FIGURES ON TROOP INCREASES

Senator STEVENS. Are the numbers you have given me not realistic in terms of the limitation of 7,000 increase in strength?

Dr. KORB. No, sir. What we told the services was to plan with the Joint Chiefs of Staff what was the minimum essential. We are talking about a number that is 15 months from now. If the Congress does as you seem to indicate, then obviously we will have to make adjustments because we need to man those new ships as you say.

Senator STEVENS. Dr. Korb, you have to make an adjustment before September 15 because that is the number we want. We want the numbers right now so that our staff can start planning how to work that in with the weapons systems.

Dr. KORB. But again, you are talking about a couple of different things here. The request that we have asked for this year, particularly for the Air Force and for the Navy, are systems that are already authorized that are actually in the fleet. If you are talking about systems that are in the procurement bill this year, they do not have to be manned for a couple of years. All we have right now——

Senator STEVENS. But I am not stupid. I am not going to give you end strength that assumes those things are not going to be manned when they come out because I am just building another manpower increase.

Dr. KORB. That is correct.

Senator STEVENS. Is that your assumption, that the Congress is going to continue to increase manpower as we bring in these new systems?

Dr. KORB. No, sir. I would say to you, Mr. Chairman, that if Congress decides it does not want to increase manpower, then it ought to take a look at the systems. But what we are talking about is the way we do business. Those systems were authorized a couple of years ago. They were already done. Those decisions have been made.

If you, for example, decide that you do not want any more ships or planes or are not going to give us any more people, we are talking about a request that would come to you 2 or 3 years from now for systems that are in this year's procurement request.

Senator **STEVENS**. I thought we were on the same side, you know, fighting with the same forces here, but I am not sure now because I am saying to you that Congress in this authorization bill has set limits on you and on me, and Congress has authorized, is authorizing systems. For instance, a new battleship is being authorized in this bill.

Dr. **KORB**. That is correct, but we are not requesting manning for that new battleship this year.

Senator **STEVENS**. But Congress every year for the last 4 years has denied your increase in manpower.

Dr **KORB**. No, sir; they have not. They have not denied it up until this year.

Senator **STEVENS**. End strength? There was a reduction.

Dr. **KORB**. Very minor, sir. It was very, very minor.

Senator **STEVENS**. I will get those figures for you. You have not received your requested increases except for 1 year.

Dr. **KORB**. But Mr. Chairman, if you go back and take a look, for example, as I mentioned, we have increased since 1980 by 115,000 people in the Active Force and 166,000 in the Reserve.

Senator **STEVENS**. I am not talking about the Reserve, I am talking about Active Force strengths, and you have an increase.

Dr. **KORB**. That is correct, but we operate on a total force. For example, one of the ways we have accommodated is our active divisions have roundout brigades. So we take an M-1 tank, put it into the Reserves; we are taking F-16 aircraft and putting them into the Reserves. We are taking FFG-7's and putting them into the Reserves. That is the way in which we are accommodating to this.

Senator **STEVENS**. Let's look at it this way. We see three new air wings, 600 ships, an additional Active Army division by 1988.

Dr. **KORB**. No, sir. The active new—the decision that has been made is that it is going to be—any new division would be a Guard division. And we constantly adjust each year.

If we take a look at the original proposal of this administration as compared to where we are now, you will find out that we have cut back all across the board. But the fact of the matter is since 1980 we have increased total force manning by close to 300,000 people to accommodate these new systems which are in the fleet and in the other operating forces. The systems that you are talking about will not be here for a couple of years.

If we get the system and we do not have the people, then we are going to have to make adjustments, you are quite correct, because we do need a balanced force.

Senator **STEVENS**. That is my point. How are you going to make those adjustments if you constantly increase troops in Europe. Where are we going to get the people to man these ships? I am talking about bodies within the authoried end strength levels. You are going to have to just request continually end strengths; is that not right?

Dr. **Korb.** No, sir. We will have to make other adjustments.

ABSORPTION OF NEW SYSTEM MANPOWER REQUIREMENTS

Senator **Stevens.** Have you programed absorption of any of these new system manpower requirements?

Dr. **Korb.** The problem we will face, for example, if you deny the increase in Navy strength this year, is manning vessels which are already on their way, which the Congress has approved. If that situation occurs, because remember, you do not allow us to transfer people from one service to another, most of the increase in Europe is not Navy increase. We asked for increases in each service. We have been denied. Actually, the only increase we got, which was an increase this year in the Congress, we got the 7,000 overall, but the main impact was on the Navy. So, even if we took troops out of Europe, we could not put them on ships because those are Army and Air Force primarily in Europe. The majority are Army.

Senator **Stevens.** Yes, well, I still do not understand how you think this committee is going to do its job when it comes down to September 15. If you do not give us the numbers that are required to meet these new——

Dr. **Korb.** Well, Mr. Chairman, we——

Senator **Stevens.** These new limitations will be about 7,000 but you are still assuming that you are going to get your end strength increase.

Dr. **Korb.** No, sir, we are not. Well, what I am saying to you is the request that we have had before the Congress, for example—and I will check the exact figures here in the authorization that they have given us—if you take a look at the request that we asked for, for example, the Navy requested 572,000, and they were reduced to 565,000. That is 6,400 overall. The Army was reduced by 2.1 thousand. The Air Force was reduced by 34,000.

Now, if we want to man ships, we are going to need those people for the Navy. If you give us the flexibility to move them around—we do not have that flexibility.

REQUEST FOR ACTIVE END STRENGTH

Senator **Stevens.** As I understand, you requested 2,164,700 people for the active end strength.

Dr. **Korb.** That is correct.

Senator **Stevens.** The House had 2,125,400 and the Senate has 2,142,674

Dr. **Korb.** That is correct.

Senator **Stevens.** On the civilians, you requested 1,072,000. The House has given you 1,067,000, the Senate, 1,054,000

Dr. **Korb.** Mr. Chairman, again, if I might make a comment here, last year the Congress told us to come in, for example, on civilians, to assume no contracting out, to request the exact number that we needed. We were told, for example, to run an experiment or test on no ceilings in industrial funded activity. That is why that number is the way it is. So we are getting a lot of contradictory directions from different sections of the Congress.

We have been told by this committee, by the full committee, to increase Reserves. We have been told to do that. And this is what we are trying to do . That report I sent to Senator Hatfield on the first of July talked about our efforts in those particular areas.

Senator STEVENS. We funded that. That was Senator Stennis' initiative. It was funded with the POMCUS money. But you continue to ask—it was POMCUS, was it not, the fifth and sixth set? Yes, it was.

He reminded me again yesterday that that was his initiative. But that is where we transferred the money in terms of our budget I am saying. It does not involve manpower limitations. I am not saying that. But I am talking about the funding for the Reserve strength as far as this committee came from moving money around in the overall budget.

But the point I am trying to make now is that both the House and the Senate, if you look at the numbers, they are considerably below the budget request for the active or the civilian. It is true they are up on the Reserves, but the active and civilian requests are substantially down. And yet the numbers that this committee is working with are still based on the original request, and they include an increase in Europe of 7,000 people. But you have got a decrease in your active end strength request of more than 7,000 people.

Now, what we are trying to find out is what are you going to do with those end strength numbers in view of the problems of the increase you requested in Europe which was, I assume, based upon your original end strength increase.

Dr. KORB. We are dealing with several different things here. The Joint Chiefs of Staff have told the Secretary of Defense that in consultation with the Commander-in-Chief, Europe, General Rogers, the minimum they need is 322,500. As a preliminary planning number, we told the services to adjust from their original request, which was 326,000, for the time being down to 322,000.

If the Congress does not give us the increases, for example, in Army or Air Force strengh—and remember, now, that you budget for us by service—we will have to accommodate the situation in Europe, for example, by more use of Reserves rather than actually having the troops there. Again, the military people have to work this out. But we cannot use those people to man Navy ships.

Senator STEVENS. I have to go vote. When I come back, I want to explore that because that involves excess cost, too, as I understand it.

[A brief recess was taken]

CONGRESSIONAL MANPOWER AND END STRENGTH CUTS

Senator STEVENS. My staff corrects me and tells me that my statement about the Congress cutting manpower end strengths over the last 4 years was not an accurate one.

So I would ask that you give us the amounts requested for active reservists and civilians for all defense activities in terms of end strengths for the past 5 years, and the amounts actually authorized.

Dr. KORB. I would be happy to do that, Mr. Chairman.

[The information follows:]

DoD Strength Requests and Authorizations

	FY 1979		FY 1980		FY 1981		FY 1982		FY 1983	
ACTIVE FORCE	Request	Auth.	Request	Auth.	Request	Auth.	Request	Auth.	Request	Auth.
Army	771.7	775.8	774.0	776.7	775.8	775.3	780.3	780.3	783.8	782.5
Navy	521.7	523.6	528.0	528.0	533.6	537.5	554.7	554.6	569.2	560.3
Marine Corps	190.0	190.0	189.0	189.0	185.2	188.1	192.1	192.1	194.6	194.6
Air Force	565.6	566.4	559.0	558.0	564.5	564.5	580.8	580.8	600.0	592.6
Total	2049.0	2055.8	2050.0	2051.7	2059.1	2065.4	2107.9	2107.8	2147.6	2130.0
SELECTED RESERVE[1/]										
Army National Guard	363.0	362.2	355.7	355.7	371.3	371.3	392.8	392.8	407.4	407.4
Army Reserve	196.7	195.8	197.4	197.4	204.5	204.5	235.3	235.3	258.7	258.7
Naval Reserve	51.4	87.0	48.9	87.0	87.4	87.4	87.6	87.6	105.5	105.5
Marine Corps Reserve	33.0	33.0	33.6	33.6	33.7	33.7	37.6	37.6	38.3	38.3
Air National Guard	92.4	92.1	92.5	92.5	94.3	94.3	98.6	98.6	101.1	101.1
Air Force Reserve	53.2	53.1	57.3	57.3	58.8	58.8	62.8	62.8	66.0	66.0
Total	789.7	823.2	785.4	823.5	850.0	850.0	914.7	914.7	977.0	977.0
CIVILIAN[2/]	1007.5	1005.5	985.1	983.6	990.0	1012.3	1024.9	1024.9	1035.5	1050.1

[1/] Selected Reserve strength is requested and authorized as an average strength floor.
[2/] Civilian strength is authorized at the total DoD level.

END STRENGTH LIMITATIONS

Senator **Stevens**. There were two votes on the floor. I apologize for being so long, but I had conversations on the floor concerning the end strength limitations, and it is apparent that the end strength limitations in the Senate are going to be reduced in the conference. It is obvious, the House is lower than the Senate, so that somewhere between will be the end strength limitation.

I want to ask you, when this bill does come out of conference, to give us an indication of where the reduction is going to be applied in terms of the military departments, and to give us a statement of how that reduction affects deployments of both military and civilians in Europe, because as I understand it, the civilian reduction is even more deep than the military.

And again, I want to say I do not think there are many people in the Senate that are more pro-defense than I am, but if I am feeling the way I am about the problems of end strengths and what is happening with regard to compliance with the congressionally imposed ceiling, I can assure you there are others that are going to be considerably exercised and that we are going to face some real questions on the flood as to what is happening.

So I want to get the information that will give us the ability to answer those questions.

Now, we have a number of other areas, however, that affect our budget in the manpower area, and I want to go into those.

Dr. **Korb**. Mr. Chairman, while you are looking, I would like to make a statement that I think will help both of us. As you correctly pointed out, one cannot consider these things in isolation. One cannot look just a manpower. One must look at procurement. One cannot look just at where troops are stationed. One has to look at other things.

For example, if the Congress should decide that we have to cut our strength back in Europe, then that requires us to do more prepositioning to have more lift. So I think it is very important that we keep all of these things in mind as we go.

Many experience has been that many times we do these things in isolation, and I think this is an area where we can work together because I think we both share the goal of having a balanced program within whatever level of forces the country is able to afford.

REDUCED FORCES IN EUROPE

Senator **Stevens**. The thing that I would disagree with that you stated is that we have not reduced forces in Europe.

Dr. **Korb**. No, sir.

Senator **Stevens**. We tried to limit the rate of increase. When this subcommittee went to Europe last year, we found that the general impression was that we had in face mandated a reduction in troop strengths, and the problem is that the Department, through its military departments that are active in Europe, broadcast the budget when it submitted it, and you are talking about 18 months, they broadcast it 2 years before it is finally approved, and leads our NATO allies to believe that that end strength is going to be—that is, the commitment of the United States is to increase our troop levels to the goals of the programs of the military departments.

And by the time we get around to approving a modest increase, we have, in the minds of our NATO allies, cut troop strengths.

As a matter of fact, I cannot remember getting a less warm reception by our own forces. As a matter of fact, this subcommittee was accused of having cut that brigade whereas, if you will recall, it was the Department that offered up the brigade to meet the budgetary ceilings. And the commander of the NATO force in Europe, it is my memory, told me personally he thought that this committee had kicked him in the gut. He felt we had made the reduction in his program when as a matter of fact most of it came from the Department. But in any event, it came about through the budget process, and we were complying with the budget process.

But the difficulty we have in meeting this manpower requirement in Europe, I still say if we do not watch it, this country is going to turn against NATO like it is the cause of the increase in military spending. It is just a matter of time because the trend line is so far going up, and there apparently is no attempt to reduce that trend line as far as the Department is concerned. And it is being one in Congress, but it is not being complied with.

My feeling is that notwithstanding the ceiling we emplaced last year on manpower in Europe, that the manpower in Europe was the same or greater than it would have been under the program without regard to our ceiling because it was just met by civilians or by temporary assignments rather than permanent assignments, that the troop strength in Europe was actually increased.

Now, we are going to have a hearing this fall to see whether that is true or not, but that is my impression right now, that the effect of our ceiling last year was nil. It has not impacted programs. It has not impacted the statement you have made here today, Dr. Korb. It has not impacted the statement the Army or the Air Force made to us about what they intended to do in Europe because their statement to us as to program strength, if you add them up, exceeds the limitation without a presidential approval.

And I really, you know, I am getting to the point I do not know. I understand more my friends on the other side of the defense issue now as a result of these hearings on manpower, because I can see where they would get to the point where they wonder how in the would Congress can control defense exepnditures. And if this subcommittee cannot, who can?

Dr. KORB. On that subject, it is important to keep in mind that one does not necessarily save money by not having troops in Europe. In fact, if you have to buy more life, it could cost more money. The program in Europe is the result of an agreement that President Carter negotiated with our allies in June 1977 called the NATO long term defense plan. That plan forms the basis for programming our NATO committee forces.

Senator STEVENS. Well, the Carter budget is not the Reagan budget, and I do not understand in terms of military manpower how he could have committed more to Europe than the Reagan budget will permit.

Dr. KORB. The commitment to have a 10-division force in Europe by D-Day requires the use of various mixes of programs. This includes people, the prepositioning of a certain amount of equipment, as well as airlift and sealift programs. Plans made during the

Carter administration were designed to achieve a proper mix but had not been accomplished by the time Mr. Carter left office.

Senator STEVENS. Well, we will have to go into that in that hearing this fall, too, and see whether or not the Carter commitment commits us to a level of expenditures that we cannot afford in view of the inflationary spiral that has taken place since that time.

BONUSES PAID IN OVERMANNED SKILL AREAS

But you know that we have now some other areas, the selective reenlistment bonus, for instance, the GAO and the President's private sector survey on cost control criticized the management of the selective reenlistment bonus program.

Now, can you tell us, in spite of that criticism, bonuses are continuing to be paid to individuals in skill areas that are currently manned over 100 percent. Why would we pay bonuses in areas where we have manning at 100 percent?

Dr. KORB. Well, Mr. Chairman, to the best of my knowledge, we do not do that. We, like you, have received a copy of the Grace Commission report. As you know, we had a terrible hemmorhage of middle management people in the late 1970's, continuing into 1980, and we used the bonus money to select, the reenlistment bonus to make up for those shortfalls.

But once a skill is manned where it should be, then we go ahead and adjust the program accordingly.

We have in my office—and I can supply these for the record—the number of areas in which we have said you can no longer pay bonuses, or the bonus amount has to be reduced as the manning at those levels goes up.

[The information follows:]

SELECTIVE REENLISTMENT BONUS SKILL ADJUSTMENT.

During the first half of fiscal year 1983, all Services conducted a thorough review of the skills which were designated for award of the Selective Reenlistment Bonus (SRB). As a result of this review, adjustments were made in the form of reductions in SRB multipliers or terminations because of improved retention. The Army reduced SRB multipliers in eight skills and terminated SRB awards in 13 skills while adding 5 new skills to the program. The Navy reduced SRB multipliers in 15 skills. They also increased multipliers in 47 skills but reduced the number of reenlistees paid by targeting the bonus to specific specialty categories (called Navy Enlisted Classifications) in certain Navy ratings. The Marine Corps reduced multipliers in 91 skills and terminated SRB awards in 64 skills. The Air Force reduced multipliers in 45 skills, terminated awards in 59 skills while increasing the multiplier in one skill.

Dr. KORB. Remember, we are dealing with a dynamic program. When we get there and when we get the reports on them then we go and take the appropriate action. A lot of times that changes from year to year and from month to month.

REENLISTMENT BONUSES

Senator STEVENS. I am informed that 70 percent of all reenlistees receive bonuses, or will receive bonuses in 1984—this is a Navy figure now—and that those bonuses will average $11,600. That is this budget that is before us.

Now, with the reenlistments up, the justification for those bonus was to bring reenlistments up, but reenlistments have come up for some of the reasons Senator Inouye mentioned.

Why should we fund a level of 70 percent for all reenlistees receiving bonuses averaging $11,600?

Dr. KORB. Well, again, Mr. Chairman, my figure, the average new bonus payment size, for example, for fiscal year 1984 is projected for the Department at $4,191 dollars. Two years ago it was $5,479.

Senator STEVENS. But you are looking at it departmentwide.

Let's look at it servicewide.

Dr. KORBIN. OK. the Navy figures, the average new bonus payment for the Navy is $5,800. Two years ago it was $7,600 because they were actually in very dire straits.

Senator STEVENS. Well, we average it on the basis of who receives bonuses. Those who receive bonuses, they will average $11,600. In 1983, the Department requested $575 million for this kind of payment. Congress appropriated $486 million, and the services spent $408 million. The 1984 request is $624 million.

Why, in view of the history of that should the Department request or even why should we request such a request at the level which exceeds by 50 percent the amount actually awarded in the previous year, with enlistments up, reenlistments up as well as enlistments up?

Dr. KORB. Well, again, I think you have to keep in mind two things. No. 1, we are trying to make up for the problems that we experienced in the last 1970's. Last year we did not get the full amount, and there were many people to whom we felt we needed to pay bonuses and we could not. That is why we have come in for the larger amount this year.

We also have had an expanding force over the past couple of years. Up to this year the force has grown each year over the last couple of years, and we are trying to get a more experienced force. One of the other things is that we are talking again about a time in which we expect the economy to begin to improve, and we expect the private sector to become even more competitive with us in terms, particularly of our skills.

The bonuses are targeted to skills in which shortages have persisted over a relatively long time and which continued to exist despite the upturn in recruitment. For example, currently 38 percent of our enlisted skills, which contain 22 percent of the enlisted force, are less than 95 percent manned. The bonuses we request are aimed at correcting this shortfall.

Again, you have to be careful. You take a skill in the Navy, for example, like boilermaker, BT rating. It is manned at about 96 percent, but we pay bonuses in so-called zones A, B, and C because the career force year groups representing the experience and management in the skill are only 80 percent manned, and that is what we are talking about.

Senator STEVENS. Well, the Air Force gave us testimony also that indicated that there are skill zones that are receiving bonuses that are manned over 100 percent.

Again, I remember the Senior Executive Service bonus program for the civilians that I helped put into effect, and how it destroyed itself when the people involved made arrangements so that this year one person got the bonus, the next year another one got it. Congress has now lost confidence in that program as being an incentive to increase productivity. We are trying to get to that in another committee on which I serve.

Last year we decided not to fund the aviation officer continuation bonus. It was not authorized even. This year it has been requested again.

Now, why is that?

Dr. **Korb**. What we are talking about here is trying to make up for a period of past neglect. We have more planes coming into the force. We have people going out at alarming rates. For example, if you take a look at the Navy, you find the people in carrier air wings, for example, are spending 7 months out and only 11 months back in the States. The overall retention rates in that are among the lowest.

We would just simply like to have more people in those areas so we could get back to something like, say, a 5-month deployment and 12 or 13 months back in the States.

FLIGHT PAY

Senator **Stevens**. Well, I am told there are 10,000 people receiving flight pay who have over 12 years' experience and no longer have any flying related to their positions. Why should we pay them flight pay?

Dr. **Korb**. Well, again now, remember, we are not talking about bonuses. We are talking about flight pay.

Senator **Stevens**. I know. I am shifting over to flight pay. The bonus program, it was obvious Congress again had lost confidence in that program, yet you want to restart it.

Dr. **Korb**. I think until we cure the problem that I have spoken about, we need to increase the retention rates among aviators. But if you switch to the subject of flight pay, we are talking about we have a plan estimate that was approved a couple of years ago that decreases the person's flying pay as they move forward in their careers, and in order to qualify for this, even it they are not flying they have to reach certain gates. They have to have so many operational hours before they get into this status in which they are not actually flying.

You cannot keep a person on flight duty all the time. Otherwise, you would have a very low retention rate. You have to give them what the Navy would call shore duty or an attempt to get back and spend more time at home with their families.

Senator **Stevens**. You have 26 generals who receive flight pay at $2,400 a year. More than 1,000 colonels receive flight pay without flying, that averages $3,500 a year. And there are more than 3,000 lieutenant colonels without flying that receive flight pay at $3,750 a year. A total of 8,900 receive flight pay without flying, and 7,000 of those have more than 12 years' experience. But flight pay is supposed to be an incentive for flying.

Why do you not take money and pay it to the people who are flying? Incidentally, 39 percent of the Army and 34 percent of the Air Force receives flight pay that no longer fly. Now, why do you not take that money instead and put it to the people who are flying? That is what it was for.

I was a pilot, and when we did not fly, we did not get our flight pay that month in those days.

Dr. **Korb**. I understand, but the law was changed. I used to fly for the Navy, too. When you got off and you were not flying, you had to put in so many hours a month to get it. But we changed that because we want to have a long-term career program.

We can now tell people in the flying communities when they come into the service that they can plan on a certain stream of income throughout their careers provided they meet certain gates. What we have eliminated is people who never really put in their operational time.

COMMISSARY USE BY RESERVISTS

Senator **Stevens**. The Senate Armed Services Committee has recommended expanding the Selected Reserves' use of commissaries.

We would like to have a report from the Department of Defense on the costs associated with that proposal for fiscal year 1984.

Dr. **Korb**. Yes, sir.

[The information follows:]

Selected Reserves' Use of Commissaries

Cost estimates for expanding commissary privileges to members of the Selected Reserve are on the basis of up to 14 days of commissary privileges each year to be use at the discretion of the member. Based on a Selected Reserve figure of 950,000 and considering factors such as maritial status, commuting distance, and an assumed rate of participation, the fiscal year 1982 costs are conservatively estimated to be an increase in the commissary appropriation of $37,600,000, an increase in the commissary stock funds of $38,000,000 and an increase of $838,329,140 in stock fund obligation authority.

REPORT BY GRACE COMMISSION

Senator **Stevens**. The Grace Commission also indicated that the commissary subsidy is subject to severe question. A few years ago the Department itself, before the Grace report, examined the alternative of closing commissaries in metropolitan areas where comparable food stores were in operation.

What became of that?

I am told the largest commissary in the world for the Department of Defense is in Alexandria, despite all of the supermarkets and everything else here, and the majority of the people that use them are in fact people who come from foreign embassies.

Dr. **Korb**. I do not think I have heard that figure. The Grace Commission pointed out that a lot of the people using the commissaries are retired people. I have never seen a figure at Cameron Station that the majority of people who go there are from foreign embassies. But we can check that.

Senator **Stevens**. Why should we maintain commissaries in metropolitan districts like this that have more than adequate coverage as far as the food distribution infrastructure of the United States.

Dr. **Korb**. Well, there are a number of reasons for it. One, this is a very high cost area, particularly for enlisted people.

Senator STEVENS. Tell me about that in terms of its relationship to Alaska, you know? Tell me about that.

Dr. KORB. Alaska is also a very high cost area.

Senator STEVENS. Well, this is high cost pay, too.

Dr. KORB. They get a variable housing allowance, but they do not get extra money for food.

Senator STEVENS. But we have changed the pay structure since commissaries were brought in. Military pay now exceeds civilian pay in this area for the Federal Government.

Dr. KORB. Well, again, it depends——

Senator STEVENS. I am talking about on an individual basis.

Dr. KORB. If you go back, as we discussed before, and compare raises, since 1972 the military have gotten more raises in their pay than civilians have. But you cannot take a look at just base pay. You have to take a look at total compensation packages.

In regard to the commissary, our surveys have shown us that it is the greatest single benefit that people perceive in terms of deciding to stay in the service and in terms of what attracts them to service life. I think that the $300 million or $400 million that goes into the subsidy more than pays for itself by the extra retention that we get.

Senator STEVENS. It is $605 million a year in the subsidy alone for that, not counting other costs involved in maintaining the commissary. I really seriously think the Department ought to look at its own proposal which predates the Grace Commission report before we have to defend ourselves against the Grace Commission report which recommends closing all 227 commissaries in the United States.

Dr. KORB. We are now analyzing the Grace report in all of its aspects and are preparing something to be sent to the President on it.

But I think the point is that we cannot look at the military pay system or the military compensation system except as a whole, and one of the things that we are doing in my office now is the quadrennial review of military compensation. What we are taking a look at is the whole compensation package, to see that it all fits together and makes sense. You cannot just change one aspect or another because it has a ripple effect and it affects other things.

MILITARY RETIREMENT SYSTEM

Senator STEVENS. Are you involved in looking at the unfunded liability of the military retirement system?

Dr. KORB. Sir, I certainly am.

Senator STEVENS. Is part of your review for the next quadrennial taking into consideration that Congress may have to require the military to start contributing to their own retirement as civilians do?

Dr. KORB. Well, we are in the quadrennial review taking a look, as I said, at the whole pay system, focusing on the retirement system as one of our main objectives, to see how that fits into our force management structure, and to test out various changes that have been proposed on what it would do to our force manning.

That is the goal of the whole military compensation system, that is, to give you a force that meets the required needs.

Senator **Stevens**. Well, I hope that is a goal that will give us a force the public will support.

Dr. **Korb**. Well, it is at the cheapest cost to achieve those objectives.

Senator **Stevens**. I remind you that we have made changes in the social security systems, and we have made changes now in the civilian retirement system. The next step is the changes in the military retirement system, and if the Department is projecting the force levels without taking into account the contribution to military retirement, and the costs of that force level without taking into account the problems of military retirement, I think that it is operating with blinders. It is coming, the next step will be a change in the military retirement system.

Dr. **Korb**. On that particular point, the Department has requested over the past several years that we go to an accrual accounting system so that the full costs of the military retirement system for the people on active duty now are displayed. We share that. We need to know those costs.

The real question is what level or what type of compensation system gives you the force you need in the most efficient way. That is what we are trying to find out.

ASSISTANT SECRETARY POSITIONS

Senator **Stevens**. Did the Department request these five new assistant secretary positions?

Dr. **Korb**. The Department originally requested two new assistant secretaries for the Office of the Secretary of Defense, and one each for the military departments.

Senator **Stevens**. Is this really an increase in status for the Deputy Under Secretaries? Are they to become Assistant Secretaries?

Dr. **Korb**. The Department's original plan was to restore for the services the Assistant Secretary positions which the previous administration had done away with, and to provide two new Assistant Secretaries in the research and development area.

LENGTH OF OVERSEAS ASSIGNMENTS

Senator **Stevens**. The average length of overseas assignments I am told now is 25 months. We would like to have the figures from the Department of what would be the change in PCS cost if that was extended to 30 months.

Dr. **Korb**. Certainly.

[The information follows:]

Increasing Average Time Overseas

The cost savings of increasing the average time overseas by 5 month would be over $500 million annually. The trauma such an extension could cause to the management structure and individuals is incalculable. The average tour in short tour areas is above the prescribed tour because of Military Services' initiatives to encourage extensions. Therefore, to increase the prescribed tour length would not mean an increase or corresponding increase in the average tour length. Family separation is a predominate factor in many members' decision to separate from the Military Service. Such tour extension would result in less retention.

The Services' initiatives to increase stability have resulted in increasing the average tour in long areas beyond the prescribed tour. The Air Force calculated the average tour in 36 month prescribed tour length areas to be over 44 months. This 44 month average makes up for the shorter prescribed tour length average time overseas. The extension would further extend the sea/shore rotation for sea duty intense Navy rating (70 percent of the enlisted force) beyond the goal of 36 months. These skills are all currently averaging 48 to 60 months at sea. The five month extension would cause the Army to change from their New Manning Standard and Regimental System before it is evaluated. Mission improving policies many times will not be the most cost effective policy. There must be a trade off. The Services are doing a good job in PCS management.

The change would also cause serious problems for many families that are normally assigned to and from overseas during the normal summer school break. This extension of tours would force many dependents to attend more than one school in a school year, and changing schools during mid-term does not improve a child education. With the national push on excellence in education, we believe this proposal would be counterproductive.

The Defense Research Board (DRB) (book 8) issues considered as an alternative 2- or 3-month tour extension. The Servives and MRA&L positions were unanimously opposed because of the serious consequences. The Comptroller agrees that a 2- or 3-month extension would decrease the voluntary extensions.

RESERVE PERSONNEL END STRENGTH

Senator STEVENS. The authorization for Reserve personnel, the end strength that we have already discussed, is higher than the request by the Department. Again, does the Department support those increase Reserve numbers?

Dr. KORB. Well, the Department would prefer to have the increases in the Active and Reserve that it originally asked for. As I mentioned, we asked for increase in both components. What the Congress has given us now, so far, by the preliminary estimates is an increase on the Reserves even more than we asked for. Actually, they have increased the Army Reserve and the Army Guard by about 9,000 over and above the increase that we had originally asked for.

HOUSING ALLOWANCES

Senator STEVENS. I am told in the variable housing allowance that there is only one area in the whole United States that is not considered a high cost of living area as far as the housing allowance to military is concerned, and that is Gallup, N. Mex. Since 1981, the variable housing allowance has increased by 42 percent. In 1981 it was $658 million. The request for 1984 is $940 million.

Why is it that only one place in the United States in not considered to be above the national average as far as housing?

Dr. KORB. Let me tell you how we determine that.

Senator STEVENS. Is it right?

Dr. KORB. I do not know, to tell you the truth.

Senator STEVENS. Well, I would like to have you check that because if that is the case, I just cannot understand it. I cannot understand how we can have a housing allowance that gives you the right to increased housing where the costs are high and find that only one place in the United States is not high. If that is correct, we would like to have for the record some explanation of that. I can tell you right now that this committee will not fund that increase at that level.

[The information follows:]

VARIABLE HOUSING ALLOWANCE

It is true that Gallup, New Mexico, is the only military housing area in the United States where the variable housing allowance (VHA) rates are zero for all personnel. There are a number of other locations where the rate is zero for selected grades and dependency status. Overall, approximately 97-98 percent of military personnel in CONUS receiving basic allowance for quarters (BAQ) also receive a VHA.

The law is very specific on how VHA rates are to be computed. The criterion for a high housing cost area is not one which is above the national average in housing costs, but rather it is one in which the housing costs experienced by military personnel exceed the BAQ by more than 15 percent. In strict adherence to the law, therefore, we pay a VHA in all areas in which housing costs of military personnel exceed 115 percent of BAQ. [NOTE: A provision in the fiscal year 1983 Continuing Resolution specified that the VHA rates for fiscal year 1983 be computed as if BAQ increased by 8 percent instead of the actual 4 percent increase. The practical effect of this provision is that the VHA is now paid only when, and to the extent that, housing costs exceed 119.4 percent of BAQ.]

This method of defining high housing cost areas, and the method of computing VHA rates, was initiated by the Congress in the Nunn/Warner Bill of 1980. The DOD has thus implemented the program in full compliance with the intent of Congress.

The current VHA system is very cost effective. Given that 98 percent of BAQ recipients are also receiving VHA, it is clear that BAQ rates do not exceed housing costs in many cases. In fact, most members are absorbing housing costs in the amount of 19.4 percent of BAQ. If BAQ were higher, more members would be overcompensated for housing costs thus wasting housing compensation and costing more than the present system.

Senator **STEVENS**. This [indicating] is the table that was delivered to us. Only Gallup has no increase in housing costs because of high costs.

Dr. **KORB**. Mr. Chairman, on that, again, you have raised a very important point. The way the law reads on VHA is the difference between what the BAQ is and what the average cost of housing is in that area. Until the average cost of housing in that area exceeds 115 percent of the BAQ, we do not get VHA. So what we are saying here is there is only one area in the country where the BAQ, the average cost of housing in the area does not exceed the BAQ by 115 percent.

Senator. **STEVENS**. I understand that, but 98 percent of all the military people stationed in the United States, living off base, receive the VHA. It was not intended in Congress that everybody receive it. Ninety-eight percent of all military people living off base receive VHA. Most of those people, many of those people, 50 percent who live off base own their own homes and receive the same subsidy as everyone else in terms of their interest payments.

Now, this becomes a taxfree subsidy, again, from the taxpayers to the military. When you figure up that comparability, I hope you take into account this, 98 percent of those people living off base receive that variable housing allowance which was intended to meet the situations in areas of extremely high cost.

Dr. **KORB**. But again, Mr. Chairman, we have submitted the analysis that we do to the Congress. We have checked them out in terms of the Department of Housing and Urban Development and the Department of Labor, the way in which we go about determining whether in fact the rates in a particular area exceed the basic allowance for quarters by at least 115 percent.

Senator STEVENS. Well, maybe we had better look out for housing and quarters on base, then, because I will tell you, 98 percent are receiving something that we thought would be for the very few who were in excessive high-cost areas, and their civilian counterparts who work at the same bases get no allowances, none at all, and they did not get these recent pay increases.

I think you are building an inequity in the Department of Defense that is going to destroy the whole Defense operation.

I am chairman of the other committee, the Civil Service Committee, and I see these things very plainly. I should because of the comparability question here, but those people who are working on the civilian side of the Department of Defense on the same bases receive no such subsidy, and they face the same costs. They were denied their pay increases on three occasions.

Dr. KORB. Well, again, Mr. Chairman, we can cite inequities on both sides. For example, when a civilian working for the Department of Defense is transferred, the individual could have certain real estate costs paid. The military member cannot have that. That is a quite substantial difference in many cases.

Senator STEVENS. A civilian does not transfer as much as a military person does.

Dr. KORB. I understand that, on average they do not, but there are inequities on both sides. I quite agree with you. And to the extent that we allow them to exist, they do create, morale problems.

CONCLUDING REMARKS

Senator STEVENS. I will submit the balance of my questions to you for the record. I am supposed to be out at Bolling right now, as a matter of fact.

I want to tell you, though, that we are going to get more deeply into this because we are just not going to continue to fund programs which are based on the Congress interpreting a program to be for a specific purpose, such as the variable housing allowance. It was intended to meet the extraordinary costs of some people in high areas. It is now providing a subsidy to 98 percent of the people who live off base.

Now, that is an abuse of the congressional intent, and that is all there is to it, and it is going to stop. We are not going to fund it at the level that will permit that kind of abuse of the program.

Dr. KORB. Again, Mr. Chairman, if you read the law, the law is very specific, and I would disagree that we are violating either the spirit or the letter of the law because we do the surveys, and on the basis of those surveys we then go ahead and pay the allocation.

Senator STEVENS. All right.

We will continue the hearing at a later date. I appreciate your consideration in providing us those numbers. We do need them very much.

Thank you very much, Dr. Korb.

SUBMITTED QUESTIONS

The committee has additional questions which we will submit to you for your response. They will be inserted in the record at this point.

[The following questions were not asked at the hearing, but were submitted to the Department for response subsequent to the hearing:]

ADDITIONAL COMMITTEE QUESTIONS

MASTER RESTATIONING PLAN

QUESTION: What is the overall manpower increase involved in the Master Restationing Plan now that we would not be giving up any old bases?

ANSWER: There is no manpower increase associated with the Master Restationing Plan. This Plan would restation three brigades from their current malpositioned installations to new decent facilities on U.S. controlled real estate at Vilseck, Wildflecken, and Giessen.

These brigades are located in crowded kasernes, which lead to inefficient operations. Once the battalions relocate to their new installions, some space will be available for the Army to better utilize in support of ongoing missions. If the entire Master Restationing Plan is completed, there will be facilities vacated that could be released to the German Government.

EUROPEAN TROOP STRENGTH

QUESTION: Isn't it true in the final analysis that deactivation of the Wiesbaden brigade in FY 1984, won't reduce our European forces at all and will perhaps result in actual increases in cost and manpower by the time all the personnel shifts and command changes are instituted?

ANSWER: If the only change to the program were the deactivation of the Wiesbaden brigade, then there would be a reduction in the level of our European forces and associated costs. However, there are other changes to include restructuring the heavy divisions in Europe to the Division 86 organization, increasing the authorized level of manning of those divisions, and other programmed changes in the FY 1984 Presidents Budget that will more than offset the reductions inherent in the deactivation of the Weisbaden brigade.

QUESTION: To what extent have our more recent military commitments to Mideast security undermined our NATO strength, particularly our reinforcement plans?

ANSWER: Our commitment to NATO remains the primary defense priority for the U.S. NATO Military Authorities are now completing a study on the implications for NATO of U.S. plans for its rapidly deployable forces. This study will examine actions that may be required to compensate for U.S. deployments to the Mideast.

QUESTION: While the Army is decreasing its unit manning, the Air Force is increasing its forces in Europe from 83,000 to 87,200. What specific Air Force requirements outweigh the Army requirements?

ANSWER: Not only the Army, but also the Air Force decreased their levels of manning in Europe in FY 83. However, since the methodology used to conform to the FY 1983 end strength ceiling in Europe was to cut proportionally the Service strengths in Europe, the Army portion of the cut (2,900) was greater than its requested increase (100) from FY 82 to FY 83 resulting in a decrease of 2800 people. The Air Force, however, because of its lower strength levels in Europe, was only cut 1,400 people of its requested 5,100 increase. This allowed them to grow in FY 83 by 3,700 people.

QUESTION: The intent of the FY 1983 Appropriations Bill was to maintain the U.S. commitment to NATO at the FY 1982 level, not to shift the increases from military to civilian forces. Is the Department of Defense planning to continue increasing our support for NATO by shifting to a greater reliance on civilian personnel?

ANSWER: The Department is reviewing all alternatives that will permit us to comply with the law and meet our NATO defense objectives. Some of these alternatives rely on additional host nation support, contractor and civilian personnel.

EFFECT OF END STRENGTH REDUCTIONS

QUESTION: What is the effect of the lower authorized end strengths on your FY 1985 requirements?

ANSWER: Our FY 1985 end strengths were programmed in conjunction with our FY 1984 and estimated future requirements. The increase in FY 1985 is planned to be less than two percent of our budgeted FY 1984 strength. However modest, this increase was part of our long-term goal to increase readiness through the manning of the force structure. Any reductions in end strength in FY 1984 will reduce that measure of readiness. The specific adversity to our FY 1985 requirements cannot be fully accessed at this time because our final FY 1985 program has not been determined.

FORCE STRUCTURE LIMITATIONS

QUESTION: Has DoD considered limiting its planned force structure expansion because of manpower limits?

ANSWER: Our plans for FY 1984 incorporate a very modest increase in force structure, here defined as the total number of billets describing the full manning requirement. From FY 1983 to FY 1984 these requirements increase about 9,000 billets for the active component, or less than one half of one percent. A 1.7% increase in active end strength was requested for FY 1984, in order to adequately staff the additional structure, and to yield higher peacetime staffing of existing structure. The overall thrust of our manpower programs through FY 1984 and in future years is to limit force structure growth to one percent or less annually in order to achieve end strengths that will yield a high level of peacetime manning, thereby improving further the personnel readiness status of the force.

SELECTIVE REENLISTMENT BONUS

QUESTION: The President's Private Sector Group recommended the Services stop paying bonuses to individuals with more than ten years of service. How does DoD respond to this proposal?

ANSWER: We disagree with the recommendation. The experience since Zone C was authorized in 1980 is that it is fulfilling satisfactorily its role of retaining trained personnel with between ten and fourteen years of service (e.g., Navy's nuclear petty officers) who are at their optimum in terms of training, age and operational experience to enter civilian industry at salary levels substantially above their military pay. Congress authorized Zone C during a period when the Services were experiencing abnormally high losses of NCOs and Petty Officers in the supervisory/mid-management levels of the enlisted force. The Committee's recommendation for its elimination is made in the wake of its success in stemming these losses and in an environment of favorable retention. Continued effective use of Zone C will make it an invaluable tool during changing retention climate.

Regarding the savings claimed, the report overstated significantly the Zone C budget for Navy and Marine Corps for FY83. Instead of the $59.8 million in the report, the FY84 President's Budget contained Zone C costs of approximately $27 million for both Services. Thus, using the Commission's own methodology, savings claimed should be reduced to $17.3 million instead of $50.1 million. The large disparity also reflects partially the continuing adjustments being made to the SRB program as the Services adjust to changing retention experience.

ADDITIONAL ASSISTANT SECRETARIES

QUESTION: Why does the Department need more Assistant Secretary positions when one goal of this Administration is to streamline the bureaucracy?

ANSWER: Approval of the proposed legislation would restore the Assistant Secretary positions eliminated from the Department of Defense in 1978 by the previous administration. Two Assistant Secretary of Defense positions and one Assistant Secretary in each of the Military Departments were eliminated and their functions were consolidated under other Executive Level officials.

Although suited to the defense policies of the time, this action has had a detrimental effect on Defense management in that it has reduced the flexibility of the Department in adapting the Office of the Secretary of Defense and the Service Secretaries to changes in defense priorities, policies, and program emphasis. Since 1978, dramatic changes in the world situation and the recognition of potential disparities in the world military balance have placed new and urgent demands upon the Department of Defense. We are responding to these demands by establishing new programs and expanding others to bolster U.S. military strength; unfortunately, we face a shortfall in the top-level managerial resources necessary to assure the success of the many and diverse actions we have undertaken as part of our program to revitalize our nation's defenses.

Restoration of the previously eliminated authorizations is essential to strengthening the leadership and direction of defense programs, improving the management and utilization of defense resources, and providing an organizational structure which is capable of responding to rapidly changing national security concerns.

RESERVE AUTHORIZATION

QUESTION: Does the Department of Defense feel these additional Guard and Reservists are necessary? How would they be employed?

ANSWER: The Department does believe that the additional strength will ultimately be required. However, in view of the fact that the Army National Guard and the Army Reserve, for whom the increases were proposed, are currently below their respective FY 1983 manning plan, the FY 1984 manning reflected in the budget request appears quite reasonable. Since the authorizations for Selected Reserve manpower represent a floor rather than a ceiling, they can be exceeded by the Reserve Components if funds are available. For these reasons the Department does not support the increases authorized by the Armed Services Committees. If the increases were approved and funded they would be used to accelerate the filling of recognized wartime requirements.

COST OF INCREASED RESERVE AUTHORIZATION

QUESTION: Can the Department of Defense absorb the increased costs associated with these additional personnel?

ANSWER: At this time it is not possible to determine where funds could be identified for reprogramming into the Army Guard and Reserve personnel accounts. If the higher average strength floors are authorized, and additional funds are not appropriated the funding will be identified during the Department's FY 1985 budget review.

ACCURACY OF VHA SURVEY

QUESTION: The VHA survey which establishes rates paid is based on data collected from the recipients. What is DOD doing to verify that the VHA survey is accurate?

ANSWER: We have taken several steps to try to ensure that the VHA rates are as accurate as possible:

(a) As explained in the attached Fact Sheet, we employ statistical techniques which "smooth out" the effects of small sample sizes and reported housing expenses which are unrealistically high or low.

(b) We have emphasized in writing to the Services the importance of the accuracy of the data and have asked them to assume command responsibility to: (1) spot check the surveys at the local level; (2) publicize to military personnel the need for accuracy; and (3) inform members participating in the survey to retain, for at least one year, all receipts used to fill out the form in order that they may be able to verify survey data if called upon to do so.

(c) We have asked the Defense Audit Service to audit the validity of the basic data compiled under the FY 1982 survey. While the Defense Audit Service found differences in some cases in the amounts reported and the detailed supporting records for rents, mortgages and utilities, it was their belief that these differences were the result of the respondents not having available the paid bills from which to obtain a correct figure and having to resort to memory of what was paid 9 to 10 months in the past when completing the survey forms. There existed no evidence to indicate any effort by any person or group of people to be falsely reporting data in an attempt to inflate their housing costs. We believe that as military personnel gain experience with the VHA program, and understand the importance of maintaining records, the accuracy of reported housing expenses will improve.

Attachment

FACT SHEET

1. PURPOSE: To describe the method used to compute average cost of housing in developing variable housing allowance (VHA) rates.

2. FACTS:

a. The legislation establishing the VHA entitlement specifies that VHA is the difference between the average monthly cost of housing in a locality for members of the uniformed services in each pay grade and 115 percent of the BAQ for that pay grade. The average housing costs have been determined by annual surveys of service members, nationwide.

b. In determining the average monthly housing costs, the arithmetic mean is not used, for two reasons. First, although some localities have thousands of uniformed service members, other areas, containing fewer such members, may yield survey results in which there are no reported costs for certain pay grades. Since the law dictates that a separate VHA be paid for each grade, another way to determine average costs is required. Second, if there were only a few members in a pay grade, year-to-year variation in the VHA amount would be undesirably large (since normal rotation policies would result in large annual percentage changes in the population being "averaged.")

c. Therefore, the average cost of housing for each pay grade is determined by a statistical procedure termed regression analysis. This technique depends on the observation that, for any locality, there is a close relationship between the amount a service member spends on housing and his/her pay grade. In regression analysis the computer plots reported housing costs on one axis and pay grade (in ascending order of gross pay) on the other axis. A curve is fitted to this data using a least squares, hyperbolic equation. Using the regression curve for a locality, the VHA Team can infer the correct VHA payments for those pay grades with few or no data points.

d. The variables used in computing average housing costs include pay grade; type and size of residence; rent price; and average costs of utilities, maintenance and other necessary housing expenses. Data from both single and married members are grouped and used in the computation, but the costs reported for members in pay grades E-5 and above who share a residence with non-family members are excluded from the computation. This reflects the policy decision that sharing a residence by members in these pay grades is unrepresentative and unfairly depresses the compensation of other members who maintain separate residences.

e. Although homeowners supply important data for determining VHA, homeowners' monthly mortgage payments are not used in the computation, and therefore, beginning in the FY84 survey, this data is not entered on the survey form. Substantial analysis has shown that the monthly cash outlays of homeowners are not correlated with the accounting costs of homeownership. (The variables which would be needed to compute accounting costs for homeowners include such difficult to measure factors as the tax savings due to the deduction of interest payments, the opportunity costs of interest foregone from down payments, settlement costs and the expected capital gain in value.) Therefore, following the lead of the Bureau of Labor Statistics' Consumer Price Index, a rental equivalency value is used to represent homeowners' costs of housing.

f. The rental equivalent cost of residences owned by service members is inferred from the regression curve for renters. This equivalent cost represents the rental cost of a residence of the same type (single detached, townhouse, apartment or mobile home) and size (1, 2, 3, 4 or more bedrooms) occupied by a service member of the same pay grade. Historical data show that the typical owned residence is not the same size and type as the typical rented residence, and that the addition of rental equivalent cost information raises the average housing cost above that value which would result from using renter data alone.

g. The uniformed services have concurred in aggregating individual service members' residences into groups called military housing areas (MHA) for the purpose of defining the term "locality" in the VHA law and as the basis for calculating average housing costs. A MHA is the locus of service members' residences, generally within twenty miles or one hour driving in rush hour traffic, surrounding a duty station. Operationally, a MHA can be defined as a collection of ZIP codes. There are about 330 geographic MHA in the continental United States, named for the installation or the nearest city (e.g., Washington, Denver, Fort Hood, Castle AFB, etc.).

h. A certain minimum population of service members is necessary in order to attain statistically reliable VHA rates. When the density of uniformed service members in a locality is insufficient to establish reliable VHA rates for all pay grades using local survey data alone, these local data are aggregated with reported housing costs of members living in other localities with comparable housing costs as determined by the Department of Housing and Urban Development. The result is a group of counties with comparable costs and identical VHA rates. The costs of housing for service members living in such a county cost group are used to calculate average housing costs for each pay grade using the regression model, and VHA rates are calculated for each county cost group. County cost groups are numbered from ZZ505 through ZZ532 in order of ascending average cost. Although half the U.S. counties (about 1500) are in such county cost groups, these counties contain less than two percent of the uniformed services population eligible to receive VHA.

i. Having determined an average housing cost for each pay grade in a MHA, the VHA amount is computed by the relationship, VHA = Average Housing Cost - 1.15 BAQ. However, for FY83 only and as a budget reducing measure, Congress directed that VHA be computed as though BAQ had increased by 8 percent on 1 October 1982; although the actual increase was 4 percent. This results in the relationship: VHA = Average Housing Cost - 1.194 BAQ, for FY83.

FAMILY HOUSING

QUESTION: To what extent has DoD considered the alternative cost of building or renting family housing?

ANSWER: The Department has evaluated many alternatives to meeting the housing needs of our military people and their families. Generally, it is more cost effective to rely on housing allowances and to let our people exercise freedom of choice in obtaining housing in the private sector. Our policy is to first rely on the private sector to meet military family housing needs. However, where private sector housing is in short supply the Department must find other ways to assure the availability of housing for our people. The Department can build its own housing on base, lease new housing built for our people, or guarantee occupancy of new housing built for our people on a priority of occupancy basis.

The Department proposed legislation in the FY 1984 Military Construction Authorization Bill which would allow us to guarantee a minimal occupancy level of new rental housing constructed in the private sector for priority of occupancy for military people. The House and Senate Conferees on the Military Construction Authorization Bill approved our program on a test basis on August 2, 1983. This approach still would require the payment of housing allowances to individuals who would enter into private agreements for renting the new units directly with the developer.

QUESTION: Personnel are also funded in the RDT&E accounts. What percentage of the $29.6 billion you are requesting for R&D is strictly for DoD military and civilian conpensation?

ANSWER: Civilian compensation accounts for 3.6% of the FY 1984 RDT&E budget request. Military compensation is funded in the Military Personnel appropriations.

QUESTION: Why couldn't this compensation be transferred to or reimbursed from the O&M account?

ANSWER: In general, all expenses of RDT&E including civilian compensation are included in the RDT&E appropriations in accordance with established DoD policies and procedures in order to provide the Congress with a complete picture of the utilization of resources among the various defense activities. Funding RDT&E related costs in the Operation and Maintenence appropriations would only distort the amount of resources required to perform the conduct of RDT&E.

QUESTION: The three services account for civilian and military compensation in different ways. The Air force lumps these costs into a few overhead program lines, while the Army and Navy split these costs off and count them against specific programs.

Why can't the services develop a uniform accounting for pay in the RDT&E account?

ANSWER: The DoD policy guidelines for the Budgeting and Accounting for RDT&E expenses are directed toward achieving an acceptable degree of uniformity among services and in the case of military compensation this is generally true. However, there does exist a difference in how the Services account for civilian compensation. One of the major factors contributing to this difference is that the Navy and to some extent the Army operate under an industrial fund concept wherein the activity pays all its expenses-manpower, material etc., out of working capital and charges is customers the full costs of its products or services. The Air Force does not operate under the industrial fund concept and therefore is able to limit its charges for civilian compensation to few overhead accounts.

QUESTION: Last year information provided to this Committee showed a total of 30,557 active duty and 77,206 civilians in the RDT&E appropriations. Is there a major increase in this appropriation?
Answer: Based on figures provided last year, the FY 1984 increase in active military manpower over FY 1983 is 4.7%, the corresponding civilian increase is 3.3%.

QUESTION: Provide the manpower levels in the RDT&E appropriations by service included in the FY 1984 request.

ANSWER: The requested manpower levels in the FY 1984 RDT&E appropriation by Service are as follows:

	Military	Civilian
Army	7,002	28,260
NAVY	6,888	30,972
AIR FORCE	17,828	19,539
DEFENSE AGENCIES	235	946
Total	31,953	79,717

RECRUITING IN THE FUTURE

QUESTION: The All Volunteer Force is getting all the personnel it requires during these times of depressed economic activity. What are your views on the capability of the military services to keep their strength levels up as the economy rebounds?

ANSWER: We believe that the Services will be able to meet their strength levels in the future. Many factors have been important to our current recruiting success. These include support by the President, the Congress, American youth, and the public. They also include the adequacy of recruiting resources, compensation, and of course, the state of the economy. It is hard to know precisely how much each factor contributes, but the economy is definitely important. Consequently, continued strong support by the Congress is essential as the economy continues to improve, especially with regard to a competitive compensation package and adequate recruiting resources.

RECRUITING RESOURCES

QUESTION: Isn't it true that the pool of 18-24 year old males will be decreasing through the mid 1990s? Just what types of additional enticement programs will be required to assure that the military gets its required numbers?

ANSWER: The pool of 18-24 year old males will decline through the mid 1990s. That and the expected improvement in the economy should make recruiting more difficult. We believe the key to continued recruiting success will depend on many factors. The most important, which require the strong support of Congress, are military pay and benefits adjusted to sustain the attractiveness of military service relative to civilian life, and adequate levels of recruiting resources. However, we do not know the precise nature of future recruiting problems. Consequently, we will attempt to determine the appropriate mix of incentives in subsequent years as requirements become known, whether job skill-specific or more general, precisely tailored to meet our recruiting needs at the least cost.

ACTIVE RESERVE COST COMPARISON

QUESTION: It is generally thought that Reserve units cost only 40-70% of comparable active units. In addition to basic pay, what other factors are involved in computing the difference between the two components of our total force concept?

ANSWER: In addition to basic pay, Reserve units have, to a varying extent, lower costs than active units in most categories of cost. Some examples include: lower allowances proportional to the lower basic pay of the part-time Reservist; lower retirement costs; lower per person costs in travel, housing, messing, medical care, and other support for both the military member and particularly for families; lower training costs because of higher experience levels and personnel stability; and lower equipment related costs resulting from lower tempo of operations (such as lower fuel, maintenance and replacement costs). There are some costs, such as for training ordnance, which are generally the same for active and Reserve units.

HOST NATION SUPPORT

QUESTION: An agreement was reached with the Federal Republic of Germany last year where they would provide reservists to support U.S. forces in time of war. This is an excellent example of host nation support. Do you foresee additional instances whereby host nation support agreements can be used?

ANSWER: The Department of Defense position is to expand the role played by Host Nation Support in meeting US Forces' logistics support requirements. In addition to the Wartime Host Nation Support (WHNS) Agreement of April 15, 1982, reached with the Federal Republic of Germany, Joint Statements of Principle for the provision of Host Nation Support (HNS) have been executed between the United States and the United Kingdom, Belgium, Luxembourg, and the Netherlands. Efforts to pursue Host Nation Support from the NATO Southern Flank nations are also ongoing. Further, support is provided to US Forces by Host Nations in the Pacific area, e.g., the Republic of Korea and Japan. In the final analysis, logistics support to US Forces on the part of other nations, both in peacetime and wartime, is foreseeable for any country or area where US Forces are stationed or may be deployed. Such support is being sought, or will be sought, by the department as a matter of policy, and is only limited by the willingness and actual capabilities of the respective host nations.

INDIVIDUAL READY RESERVE BONUSES

QUESTION: DoD has requested authorization of enlistment and reenlistment bonuses for members of the Individual Ready Reserve. These are people who have served recently on active duty or the Selected Reserve and have some period of their obligated service remaining but do not participate in organized training. Would you comment on the advantages which the Department expects to obtain by the payment of the proposed bonuses.

ANSWER: Congressional approval of the Individual Ready Reserve (IRR) bonuses is vital to the Department's comprehensive proposal to improve pretrained individual manpower (PIM) to meet wartime mobilization requirements. The IRR bonuses will be used to sustain and increase the IRR until a longer military service obligation, also part of this comprehensive program, takes effect. The bonuses are expected to produce approximately 130,000 reenlistments and enlistments in the IRR between fiscal year 1984 and 1988. These gains will be in combat, medical, and other critical skills needed in the early days of a war. Longer IRR commitments resulting from enactment of an eight year military service obligation will only begin to produce increases in required mobilization manpower in 1990.

The current peak manpower shortfall is 156,000. This is projected to increase to 194,000 in fiscal year 1989. Numerous legal and policy changes implemented by the Department have contributed to significant strength gains in the IRR since 1977 and these will continue to help IRR strength to a limited extent. The only remaining interim solution to overcome the large manpower shortfalls between now and 1990 is the IRR bonus program. In fiscal year 1981, the IRR reenlistment bonus test added over 6,600 members to the IRR at a cost of $4.0 million and more than 4,000 of the reenlistments were obtained in the last two months of the test when administrative procedures were simplified. The proposed reenlistment bonus of $900 will be offered to retain proven, experienced servicemembers. By contrast, it costs over $12,000 to recruit, pay and train each new member of the force. The proposed cost of $21.1M for the IRR reenlistment bonus to retain approximately 23,000 members in the IRR should therefore be viewed as

REDUCED ATTRITION

QUESTION: Your statement mentions that the Services have reduced their attrition losses. This is a good move, and I would be interested in what factors have influenced this trend?

ANSWER: The single greatest factor contributing to the reduced attrition is the increased percentage of high school diploma graduates (HSDG) we are accessing. In FY81, HSDGs comprised 81 percent of the accessions, and the overall attrition of 11.1 percent broke out as: HSDG, 9.6 percent; Non-HSDG, 15.6 percent. In FY82, HSDG comprised 86 percent of the accessions, and the overall attrition rate of 10.6 percent broke out as: HSDG, 9.1 percent; non-HSDG, 17.4 percent. Of course, the factors which contributed to the higher HSDG content cannot be ignored: a growing regard of the American people for military service; Congressional support for pay incentives, bonuses, and educational incentives along with sufficient resources for recruiting; and the recent economic conditions.

IMPROVED ATTRITION RATES

QUESTION: Apparently, you still lose 10.6% of your recruits during the first six months of service. Are you looking for additional improvements in this area?

ANSWER: We continually look for ways to reduce attrition rates. In fact, the Joint-Service Job Performance Measurement/Enlistment Standards Project which Congress provided the impetus and support for, should give us a better grasp on our ability to reduce attrition by programming recruits for the needed skills where they have the greatest probability of success. Beyond our efforts to improve classification and management of recruits, however, we need your continued support for the incentives which will continue to attract high quality accessions.

QUALITY OF ENLISTEES

QUESTION: Your statement mentions that quality of enlistees is measured most frequently in terms of educational attainment and aptitude scores. Would you not say that the percentage of attrition losses is another measure of the quality of enlistees the Services are recruiting?

ANSWER: Yes. The degree of attrition is a measure of quality. In fact, one reason the Services prefer high school graduates is that they have nearly half the attrition rate of those without high school diplomas.

G.I. BILL

QUESTION: What are the reasons the DOD does not support enactment of a new G.I. Bill at this time?

ANSWER: A new G.I. Bill is not needed at this time. Recruiting and retention remain excellent. Our current programs are working well. Should recruiting and retention begin to falter in the future, perhaps as the result of an improving economy or a decline in the recruit-age population, we will recommend that mix of additional recruiting and retention resources which we believe will most efficiently alleviate the particular force manning problems that have arisen.

This mix may include a new G.I. Bill. However, proponents of a new G.I. Bill to solve force manning problems should be aware that, while a large across-the-board educational benefit may increase the supply of higher quality recruits to the Services, the cost per additional recruit will probably be large. Further, relying on an across-the-board educational benefit may increase retention problems in the technical skills. Special features, such as the opportunity to transfer unused benefits to dependents, may mitigate the potential retention problem, but reliance on an across-the-board educational benefit does pose this risk.

TASK FORCE PERSONNEL

QUESTION: The Navy is planning to send one or two carrier task forces to Central America for 5-6 months. What effect will this have on sea-shore rotation of naval personnel?

ANSWER: During the next several months, there will be several deployments of elements of the US Navy into the waters around Central America. Each of the deployments will not last more than approximately three weeks each. Sea-shore rotation of naval personnel assigned to ships deployed to Central America will not be affected. As with any other peacetime deployment, a few planned rotations of service members may have to be modified to accommodate the individuals preferences and needs of the service. Such changes are normal and are dealt with in the normal course of carrying out the sea-shore rotation program.

QUESTION: Will this deployment be in addition to our usual deployment of carriers to the Med, Pacific, Indian Ocean and Atlantic? Or, will something else be stopped?

ANSWER: The Navy is responding to the current crisis in Central America by using the inherent flexibility of naval forces, in particular the Carrier Battle Group (CVBG). While this represents additional tasking, we are responding by adjusting the already scheduled movement of our CVBGs.

QUESTION: How many naval personnel will be in this task force? Will the same people stay the whole time or will they be rotated?

ANSWER: There are 7183 enlisted personnel and 613 officer personnel for a total of 7796 naval personnel assigned to the ships and squadrons of the Ranger Carrier Battle Group. The same people will not stay the whole time. Those personnel scheduled to arrive or depart will be transferred via normal Navy replacement programs (i.e., Carrier on board delivery (COD), replenishment ships). In certain cases, due to operational schedule changes for ships in the task force, a few individuals might encounter delays in rotation due to the availability of ports for debarkation.

VARIABLE HOUSING ALLOWANCE

QUESTION: It is the committee's understanding that when calculating VHA rates, the cost of renting but not home ownership is factored in. Considering that more than 50% of all VHA recipients are home owners whose rates might be more stable than renters, how can the information be adequate to correctly access the annual change in the cost of housing?

ANSWER: Homeowners supply important data for determining VHA, but homeowners' monthly mortgage payments are not used in the computation of VHA rates. Substantial analysis has shown that the monthly cash outlays of homeowners are not correlated with the accounting costs of homeownership. Such variable factors as down payments, settlement costs, loan period, reduced tax liabilities and eventual capital gain or loss tend to distort the members actual expense for housing. A rental equivalent cost of owned residences is inferred from statistical analysis of rental data.

QUESTION: Is some targeting mechanism used to administer the 9.1 percent increase or is the increase provided evenly by zip code or region?

ANSWER: The VHA rates for FY 1983 reflect a national average increase in total housing costs of approximately 9 percent. The increased rates for this year are not done on an even distribution. The mechanism used is a complex mathematical and statistical analysis of the survey data so that new rates can be determined by grade for each military housing area (MHA). Therefore, the determinant of a rate for a given grade at a given MHA is the total housing cost as determined by the analysis of survey data.

QUESTION: Did housing costs decline in any area?

ANSWER: Yes, seventeen of 341 military housing areas (MHAs) or 5% showed a general cost decrease this year. These typically were smaller places and the population affected is less than one percent of the population entitled to VHA. Other MHAs showed cost decreases in one or more pay grades, although the general trend was a positive cost growth. Some examples of places with across-the-board cost decreases were: Edwards AFB, CA; Volusia County, FL; Chicago, IL; Evansville, IN; Traverse City, MI; Port Huron, MI; Battle Creek, MI; Lincoln, NE; Fort Drum, NY; Orangeburg, SC; Chattanooga, TN; Amarillo, TX; Brownsville, TX; Richmond, VA; Morgantown, WV; Sugar Grove, WV; Charleston, WV.

QUESTION: What area is receiving the largest increase?

ANSWER: Although no single statistic has been developed to ascertain what single area had the largest increase, the following military housing areas received the largest pay per grade average dollar increases in VHA in FY 83: Oakland, CA; Monterey, CA; Bakersfield, CA; Hartford, CT; New Haven, CT; W. Palm Beach, FL; Atlanta, GA; Baton Rouge, LA; Rockland, ME; Petosky, MI; Springfield, MO; Joplin, MO; Cape Hatteras, NC; Asheville, NC; Perth Amboy, NJ; Ft Dix/McGuire AFB, NJ; Peekskill/West Point, NY; Vance AFB, OK; Tulsa, OK; Abilene, TX; College Station, TX.

QUESTION: Please provide the percentage cost increases by rental payments, utilities, maintenance and other required expenses. Describe also the effect of each on the total 9.1 percent increase.

ANSWER: Column A of the following table displays the annual percentage growth in housing costs between FY 82 and FY 83. The attached fact sheet summarizes the regression technique used to estimate the costs from survey data. The computation model does not retain for separate output the internal components of total housing costs (rent, utilities, maintenance, other).

Approximation of the annual rough percentage growth of rent (Column B) and utilities (Column C) may be gained from the raw data used in the computation model. This does not include any data for homeowners nor does it reflect the regression used to infer costs where data is sparse. The existing files do not contain separate maintenance and other costs. This data should thus be considered illustrative of changes from FY 82 to FY 83, but not precisely definitive.

	A	B	C
Pay Grade	DOD Total Housing Cost Growth Renter + Owner	Rental Growth	Renter Utilities Growth
E-1	8.6%	8.3%	14.9%
E-2	9.8	9.0	23.6
E-3	6.9	7.8	19.9
E-4	9.0	7.8	20.0
E-5	8.7	7.9	21.5
E-6	9.1	7.7	19.1
E-7	8.7	7.2	17.2
E-8	8.3	9.6	18.5
E-9	8.5	6.7	13.4
W-1	9.2	9.3	23.8
W-2	11.3	9.2	13.8
W-3	8.8	10.6	10.9
W-4	7.8	6.7	22.9
O-1E	8.7	10.9	26.9
O-2E	10.2	8.7	14.2
O-3E	7.3	8.3	20.2
O-1	8.6	11.1	26.0
O-2	10.8	7.9	23.7
O-3	10.4	11.0	23.3
O-4	9.7	11.0	20.5
O-5	9.1	12.1	18.0
O-6	10.2	11.6	18.8
Total	9.0%		

UNEMPLOYMENT COMPENSATION

QUESTION: In FY 1984 the Department of Defense is budgeting for unemployment compensation for the first time. Please provide the calculations used which show how the estimates for unemployment compensation were generated.

ANSWER: The number of eligibles (separatees under honorable conditions, excluding retirees) was reduced to exclude all officers and those enlisted in grades

E-6 and above. Individuals in these grades would generally be close to retirement or have job offers which enticed them to leave the Service. The computation of funding requirements follows:

	Total
Estimated Eligibles	222,014
60% Draw Benefits	133,208
Weekly Rate	$ 115
Maximum 13 Weeks	1,495
Cost ($000)	199,146

QUESTION: Please explain who is eligible to receive unemployment compensation.

ANSWER: The Miscellaneous Revenue Act of 1982, signed by the President on October 25, 1982, provides that Federal unemployment benefits would be payable to unemployed ex-Service members who (1) were separated under honorable conditions (and, in the case of officers, did not resign for the good of the Service); and, (2) had completed the first full term of active service they agreed to serve. Ex-Service members who were separated prior to completing their initial term of active service could qualify for unemployment benefits if they were separated under honorable conditions (a) for the convenience of the Government under an early release program, (b) because of medical disqualification, pregnancy, parenthood, or any service-incurred injury or disability, (c) because of hardship, or (d) if they had served for 365 continuous days, because of personality disorders or inaptitude. Other provisions (3) requires a four-week waiting period between the week in which the individual is separated and the week in which he or she first becomes entitled to compensation; and (4) limits an eligible ex-Service member's benefits to 13 weeks. The provision would be effective for separations on or after July 1, 1981, but only for benefits payable after the date of enactment.

Also, effective October 1, 1983, unemployment benefits paid to ex-Service members would be charged to the Department of Defense.

VHA

QUESTION: Please provide a copy of the survey utilized in determining VHA rates. What oversight of the survey process does the Department of Defense undertake to insure validity of the results?

ANSWER: The Variable Housing Allowance Program is supported by the Defense Manpower Data Center where the staff includes trained and qualified survey research professionals who have designed and tested the survey instrument and associated administration and control procedures. The fourth edition of the VHA survey is now in the field. The principal check on the validity of survey data has been analyses of the consistency of results. The three previous surveys have proven to be internally consistent both year-to-year and place-to-place. Additionally, a response rate study of the FY83 survey is now in progress. An external audit of the FY82 survey data was conducted by the Defense Audit Service. This audit did not demonstrate any systematic bias in the data. A field check by an audit agency is projected for the FY84 survey data (fall 1983). A copy of the FY84 survey form is attached.

QUESTION: What causes such wide variance in the average VHA payments among the services?

ANSWER: Three factors contribute to this variance:

(1) The most significant factor is that the CONUS stationing pattern is different among the services. The sea services, with the highest average VHA, have stationed the bulk of their personnel along the seacoasts where average housing costs exceed the national averages. The Air Force is stationed in a more widely dispersed pattern. The Army, which has the lowest average VHA, maintains its largest troop concentrations in the South and South Central United States where average housing costs are relatively lower.

(2) The ratios of members entitled to VHA at the with and without dependent rates vary by service. (The range for enlisted members is 73.9 percent - 90.4 percent with dependents.)

(3) If a single average VHA is computed for each service, there is a variance due to the grade composition (the Air Force has no warrant officers, a smaller fraction of enlisted members, for example). This variance disappears when pay grade averages are computed.

JTR WEIGHT ALLOWANCE

Question: Regarding the recent change to the JTR policy on weight allowance for the Army, how old is the current policy? Why was it originally enacted? Why is it being changed now?

Answer: In January 1980, OSD directed the Army and Air Force to implement a Full Joint Travel Regulation (FJTR) household goods policy for Germany. The FJTR policy requires that command-sponsored personnel assigned to Germany ship their personally owned household goods in lieu of being provided government furniture as has been done since WWII. In January 1981, because of rising transportation costs, the Army and Air Force were asked by OSD to restudy the economies of continuing the FJTR policy. The "relook" showed that staying with the FJTR over a 15-year period would cost the Army $4.4 million; thereafter, the Limited Joint Travel Regulation (LJTR) alternative will save the Army about $20 million annually. These savings result from reductions in transportation costs associated with shipment of household goods to and from Europe, intransit storage and claims.

Based on the conclusion that continued implementation of the FJTR would cost the Army more in the long run, OSD revised its policy on March 11, 1983, to allow the Army a limited JTR weight allowance for shipment of household goods to Germany.

The FJTR program remains in effect for the other Services in Germany, as it has been determined to be the most cost-effective method of providing furnishings for thir assigned personnel. This is so because of the difference between the two Services in the number of installations; in-theatre moves; and people in the lower pay grades. An economic analysis conducted by the Air Force during 1981 reaffirmed the fact that an FJTR program was their most cost-effective option for that Service.

ENLISTMENT AND SELECTIVE REENLISTMENT BONUS

QUESTION: Why is there such a wide variance among the services enlistment bonus payment? What is the policy of the Department of

Defense regarding equity among the services in this area?

ANSWER: Enlistment bonus amount for each Service is based on the need for the bonus as an incentive to attract high quality recruits to critical military skills. For instance, 80% of the Department's enlistment bonus budget goes to the Army where the incentive is needed to encourage soldiers to train into combat arms skills. On the other hand, the Air Force with less than 1% of the budget has little need for the enlistment bonus except in a few highly technical skills. The policy in the Department is to be responsive to the Services' needs in the distribution of the enlistment bonus. This is consistent with the objective of applying the bonus to any military skill meeting the established criteria to qualify for the bonus. Considerations of equity would be driven by the desire to place the bonus where the need is greatest.

QUESTION: What causes the Navy's requirement for SRB payments to be more than double those of the other Services? What does the Office of the Secretary of Defense do to insure intra-service equity?

ANSWER: In FY 1984, the number of new payments for the Navy's Selective Reenlistment Bonus (SRB) program is programmed to be 30% of the DoD total. This compares to 27% for the Army, 12% for the Marine Corps and 31% for the Air Force. Thus the number of SRB reenlistments programmed for the Navy is not disproportionately higher than those of the other Services; however, the Navy's program costs more. One reason is that the average bonus payment size in the Navy is larger than that for other Services because Navy's reenlistees include nuclear trained personnel who are authorized by law to collect as much as $20,000 per reenlistee compared to the maximum $16,000 the others collect. Another reason is that the Navy has targeted a larger portion of their SRB budget toward retaining Petty Officers whose higher grades and longer service make each bonus reenlistment more costly. The Office of the Secretary of Defense reviews requests for bonus from all the Services to insure that the bonus criteria are uniformly and consistently applied in designating skills for the bonus. Skills are designated based on need for the incentive to solve manning shortages. This demonstration of need is the primary factor which decides how much of the SRB budget goes to each Service.

QUESTION: Who decides which MOS's are eligible/ineligible for SRBs? On what criteria is this based?

ANSWER: Reenlistment bonuses are paid only to the skills with chronic retention problems and/or severe manning shortages. Annually, each Service submits to the Office of the Secretary of Defense (OSD) its proposed bonus program in terms of skills in which they desire to pay reenlistment bonuses, levels of bonus (multipliers) and the zones (A, B, or C) in which they desire to offer payments. OSD reviews those proposals, looking primarily at what the manning is in that skill by zone (experience level), past difficulty retaining people in that skill, future manning requirements, and improvements to be expected at various bonus levels. Key factors are training and replacement costs, manning shortages by zone, overall skill manning, and changes in requirements. This review is done for each skill in which a bonus is desired to be paid. Bonus awards are not triggered automatically by a certain percentage of undermanning. An evaluation of all of the foregoing factors is made, together with the essentiality of the skill to the Service's mission, before a bonus award is approved. The appropriate level for a bonus in a particular Service is determined by the amount of increased retention needed to overcome or alleviate the shortage in a zone or zones within a skill. Application of improvement factors to the retention being experienced in a skill provides a measure of the improvement to be expected from award of a particular bonus level.

SELECTIVE REENLISTMENT BONUS

QUESTION: What are the anticipated savings in Fiscal Year 1984 associated with the new bonus pay back regulations as instituted in April 1983?

ANSWER: The primary purpose of the April 1983 memorandum to the Military Departments is to standardize recoupment policies and procedures among the Services. The changes should result in an increase in the cases for which recoupment of the bonus is appropriate and a corresponding increase expected in the amount recouped. The Department is not able to determine how much additional funds should be realized in Fiscal Year 1984 from these improvements. It should be recognized, however, that DoD-wide, less than 1% of the selective reenlistment bonus paid become recoupable. By way of specific example, for Fiscal Year 1982 the Navy identified approximately $1.1 million for recoupment which represented about 1/3 of 1% of the Navy's Fiscal Year 1982 selective reenlistment bonus program. Therefore, even with a more aggressive recoupment program resulting from the changes, the increase in funds should not substantially impact on the Services' bonus budgets.

ANG SELECTIVE RE-ENLISTMENT BONUS

Question: Why are the following skills considered critical? Why are incentives paid in these skills? What percent of incentive payments are made to individuals in these career fields? The list includes food service, audio visual related specialists, maintenance management, vehicle maintenance, structural pavement specialties, transportation packaging, vehicle operator, sanitation, fuel specialists, inventory management, administration of public affairs personnel, pharmacy, veterinary, optometry, and dental.

Answer: Any career field in the ANG which is manned below 90% is considered critical for the purpose of bonus qualification. The above listed specialties are considered key "go to war" skills in the event of unit mobilization. They have a direct impact on the combat ready posture of all ANG units. Participants re-enlisting in the above listed career fields represent and receive approximately 5 percent of all ANG bonus payments.

REENLISTMENTS

QUESTION: Are CAT IV reenlistments increasing? What was the number of CAT IV reenlistments in Fiscal Year 1982 and Fiscal Year 1983? Why is the Army increasing CAT IV reenlistments when the goal of the Department is to increase the quality of personnel?

ANSWER: Category IV (CAT IV) first term reenlistments have been increasing in absolute numbers over the past years. However, the following comparison of Fiscal Year 1981 and Fiscal Year 1982 reenlistments show that CAT IV first term reenlistments as a percentage of total first term reenlistments were about the same for those two years:

	Total Reenlistment	CAT IV*	%
Fiscal Year 1981	69,435	16,539	24
Fiscal Year 1982	77,279	18,248	24

The reenlistment of CAT IV soldiers in the Army should not be viewed as being counterproductive to the goal of increasing the quality of its personnel. The Services use very effective quality indicators at the reenlistment point to assess the suitability of their members to serve in the career force. Most notable is the member's record of performance during the first term of service. In order to insure that the pertinent factors are fully considered the Army has recently established a Reenlistment Screening Board with the two-fold purpose of controlling initial term reenlistments and insuring reenlistment of the best qualified. Finally mental category is a measure of trainability at initial entry. How an individual subsequently performs and demonstrates career potential determines whether or not that individual is reenlisted. Once mental category has served its purpose as an initial entry screen it is of no further use as a means to distinguish between one qualified member and another.

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*Comparable data for Fiscal Year 1983 is not available.

MILITARY AIRLIFT COMMAND (MAC) EXPENDITURES

QUESTION: The Military Personnel, Army, FY 1983 reprograming request (FY 83-23 PA) states that air passenger expenditures are lower than projected for FY 1983. What is the impact of this change on the FY 1984 budget request? Is the decreased level of MAC expenditures unique to the Army, or is this same decrease requirement occurring in the other Services? If the change is unique to the Army, please explain why the other Services are not experiencing the same decreases. Have MAC rates been adjusted since the Congressional submission of the FY 1984 budget?

ANSWER: The impact of the change on the FY 1984 budget request is the same as in FY 1983, that is the funds are available in FY 1984. This decreased level of expenditures is unique to the Army. The other services are not experiencing the same type decrease because the decrease is related to workload estimates used in developing the budget. Rates charged by Military Airlift Command have not been adjusted since the Congressional submission of the FY 1984 budget.

PERMANENT CHANGE OF STATION (PCS)

QUESTION: What is the average tour length for non-CONUS assignment?

ANSWER: DoD Directive 1315.7 prescribes overseas tours of 36-48 months, 30 months, 24 months, 18 months, 15 months, and 12 months. Based on the number of locations and the prescribed tour length for each location the average is 25 months. This average is not representative of the individual average tour length where the majority of U.S. Forces are stationed overseas. Approximately 73 percent of U.S. Forces outside CONUS are located in an area where the prescribed tour is 36 months. Further, tours of 18 months or less are unaccompanied.

QUESTION: What percent are 12, 18, 24, and 36 months?

ANSWER: Of the total locations overseas, approximately 20.7 percent have tour lengths of 12 months, 2.2 percent are for 15 months, 3 percent are for 18 months, 41.5 percent are for 24 months, and 27.4 percent are for 36 months. While 24 month tour locations constitute 41.5 percent of the total, the majority of U.S. Forces stationed overseas are in areas where the prescribed tour is 36 months.

QUESTION: What percent of rotation moves do not involve travel to or from CONUS?

ANSWER: Of the total rotational moves, approximately 3.5 percent are inter-theater transfers and do not involve travel to or from CONUS.

Military Personnel

Question: Please provide the FY 1984 costs and end strength assigned to the following organizations/departments. Display the cost by appropriation (O&M, MILPERS, and RDT&E) and by military and civilian personnel including direct and indirect hires as well as reimbursables. The list of agencies include DARCOM Headquarters and its subordinates, Chief of Naval Material Headquarters and its subordinates, public affairs (by military department includes also OSD and any others), Washington Headquarters Services, Air Force Systems Command Headquarters and subordinate commands, Office of the Secretaries of the Military Services, Offices of the Service Chiefs, and the three established and two planned CONUSA's (provide by individual CONUSA's).

Answer: The information requested is provided in the following table:

FY 1984 COST AND
MILITARY AND CIVILIAN END STRENGTH

	Strength		Cost/$/Thousands		
Name of Activity	Civ.	Mil.	O&M	MilP	RDT&E
Department of the Army					
Secretary of the Army	249	131	50,817	3,943	-
Army Chief of Staff	2,756	1,929	119,921[1]	62,228	5,913
DARCOM	267	2,199	94,947[2]	8,723	4,743
ARRCOM	457	33	19,757	986	-
ARRADCOM	306	23	9,841[3]	719	-
AVRADCOM	86	7	-	235	3,520
CERCOM	159	30	6,611	816	-
CORADCOM	108	19	-	516	5,724
DESCOM	110	17	4,465	467	-
ERADCOM	132	16	-	502	5,599
MICOM	327	31	13,934[3]	901	-
TACOM	372	37	12,929	1,017	4,841
TSARCOM	359	36	11,281	1,137	-
First Army[5]	315	246	11,162[4]	6,456	-
Fifth Army[5]	287	202	10,282[4]	5,377	-
Sixth Army[5]	243	194	9,570[4]	5,297	-

[1] includes O&M, Army; O&M, Army Reserve; O&M, Army National Guard; and MAP

[2] includes O&M, Army & MAP

[3] Army Industrial Fund

[4] includes O&M, Army and O&M, Army Reserve

[5] two additional CONUSAS were not approved programs for inclusion in the President's FY 1984 budget.

FY 1984 COST AND MILITARY AND CIVILIAN END STRENGTH

	Strength		Cost/$Thousands		
Name of Activity	Civ.	Mil.	O&M	MilP	RDT&E
Department of the Navy					
Secretary of the Navy and Staff	560	276	36,463	9,132	-
Chief of Naval Operations	705	1,337	43,532	46,123	-
Chief of Naval Material	487	146	23,396	5,212	-
Naval Air Systems Command	502	72	17,935	2,525	-
Naval Air Logistics Command	145	121	4,664	2,626	-
Naval Sea Systems Command	862	51	32,940	1,751	-
Naval Electronic Systems Command	153	31	5,708	1,077	-
Naval Supply Systems Command	513	110	29,909	4,052	-
Naval Facilities Engigeering Command	581	57	19,069[1]	2,047	-
Office of Naval Research	398	40	-	1,489	20,121
Commandant Marine Corps	133	430	5,590	12,011	-

[1] In addition, $16,520 of Military Construction funds support command operations.

FY 1984 COST AND MILITARY AND CIVILIAN END STRENGTH

Name of Activity	Strength		Cost/$/Thousands		
	Civ.	Mil.	O&M	MilP	RDT&E
Department of the Air Force					
Secretary of the Air 1/ Air Force	178	142	4,899	4,323	-
Chief of Staff, Air Force	1,091	1,603	25,920	55,881	-
HQ Air Force Logistics Command	1,501	478	36,453	15,674	-
HQ Air Force Systems Command	654	750	-	24,190	15,883
HQ Aeronautical Systems Division	110	53	-	1,512	2,659
HQ Electronic Systems Division	74	60	-	1,678	1,797
HQ Space Division	98	97	-	2,913	2,404
Aerospace Medical Division	31	36	-	1,087	753
HQ Armament Division	56	57	-	1,629	1,348

FY 1984 COST AND MILITARY AND CIVILIAN END STRENGTH

Name of Activity	Strength		Cost/$Thousands		
	Civ.	Mil.	O&M	MilP	RDT&E
Public Affairs:a/					
Army	210	126	9,400	2,800	-
Navy	61	137	2,600	3,600	-
Marine Corps	10	185	300	3,500	-
Air Force	96	277	2,800	6,200	-
Office of Secretary of Defense and Defense Agencies	47	37	2,000	1,600	-
PA Subtotal	424	762	17,100	17,700	-
Legislative Affairs:a/					
Army	29	32	1,072	1,638	-
Navy	20	50	702	2,196	-
Air Force	29	33	1,066	1,098	-
Office of Secretary of Defense and Defense Agencies	36	16	1,510	695	-
LA Subtotal	114	131	4,350	5,627	-
Washington Headquarters Services:	437	96	74,952b/	3,605	-

a/ These are also included in the separate service displays which preceeded.

b/ $14.3 million is for the personnel costs of WHS. The balance of the funds is for costs to provide supplies, equipment, rental space, automatic data processing and other services for organization receiving service from WHS.

VARIABLE HOUSING ALLOWANCE (VHA)

QUESTION: What percent of VHA recipients either own or are buying their home? Please provide this information by enlisted and officer personnel and by service for the years 1981 through 1983.

ANSWER: The information for FY 82 and FY 83 is as follows (this data from the FY 81 survey is not presently available).

	FY 82			FY 83		
Service	Rent	Own	Other*	Rent	Own	Other*
Army						
Off	30.6	68.8	0.6	29.4	70.1	0.5
Enl	57.0	40.0	3.1	58.1	39.1	2.8
Navy						
Off	23.8	75.7	0.5	24.5	75.2	0.3
Enl	56.7	41.0	2.2	59.7	38.6	1.8
Marine Corps						
Off	30.4	68.8	0.8	27.9	71.6	0.6
Enl	65.9	31.1	3.0	67.9	29.2	2.9
Air Force						
Off	20.3	79.3	0.4	23.1	76.6	0.3
Enl	52.5	46.3	1.3	58.0	40.8	1.2

* Live with friends and relatives, receive housing in lieu of cash for services, don't know, etc.

QUESTION: Do both homeowners and renters receive the same VHA payment by region?

ANSWER: There is no difference in the VHA paid to homeowners as opposed to renters.

PERMANENT CHANGE OF STATION (PCS)

QUESTION: What percent of accession moves involve moving between CONUS and overseas?

ANSWER: Approximately 19.3 percent of accession moves involve a move from CONUS to an overseas location. These moves are necessary to fill overseas requirements and maintain force readiness. They occur when initial entrants receive training of less than 20 weeks' duration and their first permanent duty station is overseas.

QUESTION: What percent of separation moves involve moving between overseas and CONUS?

ANSWER: Approximately 16 percent of separation moves involve a move from overseas to a CONUS location for separation processing and discharge or release. These moves occur when members are held in the overseas area beyond their normal tour completion date because they do not intend to remain in the service and would have less than 6 months retainability if they were returned to CONUS. This policy precludes unproductive assignments for short periods of time and saves PCS dollars. These moves also occur when members serving overseas are administratively separated for unsatisfactory performance or reasons of hardship.

QUESTION: Please explain the difference in rates among the services in accession and training travel. If there are differences in policies among the services, please explain.

ANSWER: There are no differences in policies among the services. The variance in rates occurs because a higher ratio of Army accession moves include travel overseas compared to other services. The Army also has a higher number of sub-moves from basic training to advanced individual training and then to the first permanent duty station, which are all counted as accession travel. Officer accession rates vary, for example, because aviators require more training enroute to the first permanent duty station, thus causing the officer accession rate to be higher. Training travel rates vary because of differences in distance traveled to training locations. Additionally, training rates have increased faster in the Army than the other services due to realignment of costs based on recently acquired actual experience. Training costs had been previously understated.

ALLOWANCES

QUESTION. What percent of the Air Force personnel receiving payment in the category Aviation Career Officer are not currently assigned to operational flying positions and neither flying or receive operation flying duty accumulation credit? Please provide your response indicating the number of recipients by rank and the average length of active Air Force service.

ANSWER: The chart below provides data on Air Force personnel receiving ACIP and not currently assigned to operational flying positions.

	Pilots	Navigators
Total Rated Inventory (2nd Lt through Lt Col)	23,076	10,196
Rated Personnel Assigned Operational Flying Positions	18,096	7,215
Rated Personnel Assigned Other than Operational Flying Positions	4,980	2,981
Capt	1,044	966
Maj	2,118	963
Lt Col	1,818	1,052

(As of April 30, 1983)

In order to place our response to your question in the proper perspective, we consider it imperative to briefly describe Air Force management of its aviator force in support of readiness and national defense.

Prior to 1974, a "fly-for-pay" system was in effect. This system required aviators to fly a minimum of four hours per month to be eligible for flight pay. As we entered the era of rising fuel costs (1974 energy crisis), reduced flying hours, and phase-out of reciprocating engine aircraft, the inefficiencies of the "fly-for-pay" system became apparent to Congressional and Service leaders.

After extensive hearings, Congress enacted the Aviation Career Incentive Act (ACIA) of 1974 and completely revised the "fly-for-pay" flight pay system. Its primary objectives were to correct the inefficiencies of the former system and to provide an incentive for personnel to enter into and remain in a full aviation career. The career incentive concept recognized that military aviation requires unique qualifications and complex technical training, and that it represents a considerable investment by the government. Congress' action in 1974 was insightful and provided the guidelines the Air Force uses today to manage its aviator force. Our policies recognize that the rising costs of fuel and flying hours require judicious management and, in response, we have carefully reduced flying activities to the minimum necessary to meet our readiness requirements. At the same time, our policies recognize that we have a wartime requirement for a large, ready resource of skilled aviators. Part of this resource is used to provide rated expertise in staff/supervisory positions. It also enables us to provide the opportunity for career broadening assignments for the rated force. Simply stated, due to peacetime resource limitations, sufficient cockpit seats and flying hours are not available to provide the entire rated force the "hands-on" flying experience necessary to maintain, on a constant basis, the day-to-day proficiency levels necessary. However, these aviators do provide the personnel resources needed for wartime. Thus, the requirement for wartime rated personnel resources and the utilization of aviators outside cockpit duties have been blended.

The management system devised to ensure that each aviator has the proper balance of cockpit/non-cockpit duties is the "gate" system, which was incorporated in law by the ACIA. The "gate" system requires rated personnel to earn the entitlement to Aviation Career Incentive Pay (ACIP) by performing direct operational flying duties for a minimum of 6 of their first 12 years and 11 of their first 18 years. This system is visible, provides compensation stability, is cost-effective, and has been proven with experience. The "gate" system further reflects the Congressional intent regarding the "incentive" purpose of the ACIA.

Implicit in your basic question is whether it is cost-effective to pay ACIP (the ACIA term for flight pay) only to those rated officers who are assigned to operational flying positions. The Air Force has examined this issue recently and determined that reversion to a "fly-for-pay" system would have a serious negative impact on the retention of highly-trained aviators, thus reducing combat readiness and increasing overall costs.

Such a proposal is in direct opposition to the principal purpose of ACIA, as stated above, to attract and retain personnel for a full aviation career. The ACIA was designed to maximize retention, preserve experience levels, and reduce extremely high training costs. A concept to restrict payment to only those actively flying would be counterproductive on all counts.

A "fly-for-pay" system would reduce retention by diminishing the attractiveness of a military aviation career. The typical rated officer would incur a substantial reduction cut in lifetime earnings, be exposed to a stop/start pay policy and be financially penalized when assigned to a position where, due to the needs of the service, operational flying is not permitted.

A decline in retention rates translates directly to a decline in rated experience levels and thus combat readiness. If a "fly-for-pay" system were implemented today, we estimate that approximately 1,525 experienced aviators would separate from the Air Force by FY88. To compensate for this, our pilot training program would have to produce an additional 220 new pilots per year. Similarly, our navigator training program would have to increase by 90 new navigators per year. Training costs are estimated at $750,000 per pilot and $400,000 per navigator, resulting in a yearly increase of some $200 million. Even this estimate is conservative since there is no way we can readily replace (at any price) the experience lost.

In summary, the obvious effects of a "fly-for-pay" program are both a decrease in readiness and an increase in costs through the loss of experienced aviators.

QUESTION: Please provide the number of Colonels and Generals.

ANSWER: The chart below provides data on active, rated, line, Air Force personnel grades O-6 through O-10 in operational flying positions, not in operational flying positions, and those receiving ACIP.

		PILOTS		
GRADE	TOTAL	OP.FLY	NOT OP.FLY	ACIP
O-10	9	6	3	0
O-9	29	11	18	0
O-8	85	30	55	2
O-7	112	31	81	26
O-6	1979	549	1430	1271
TOTAL	2214	627	1587	1299
		NAVIGATORS		
O-10	0	0	0	0
O-9	0	0	0	0
O-8	4	0	4	0
O-7	11	0	11	0
O-6	571	15	556	314
TOTAL	586	15	571	314

Entitlement to continuous monthly ACIP ceases for a commissioned officer upon completion of 25 years of service as an officer. However, an officer in a pay grade below O-7 is entitled to monthly incentive pay if he performs operational flying duty. Thus all Air Force rated personnel in the pay grade O-7 and above, with more than 25 years of commissioned service, by law, may not receive ACIP even if they fly. Those members in pay grade O-6 may receive ACIP beyond their 25th year only if they perform operational flying.

Because the purpose of ACIA of 1974 was to provide an incentive for officers to undertake a career in military aviation, the Act established a management system of operational flying-time standards, or "gates," for the entitlement to continuous ACIP. Under the ACIP "gate" system, an officer qualified for aviation service is entitled to continuous ACIP at the appropriate rate (1) until he completes 12 years of aviation service; or (2) if he has at least 6 years of operational flying duty at the 12-year gate, until he completes 18 years of aviation service; or (3) if he has at least 9 but less than 11 years of operational flying duty at the 18-year "gate," until he completes 22 years of officer service; or (4) if he has at least 11 years of operational flying duty at the 18-year gate, until he completes 25 years of officer service. An officer not entitled to continuous ACIP because of failure to make a gate but who is required by competent orders to perform operational flying duty is nevertheless entitled to ACIP on a monthly basis if he performs at least four hours of aerial flight a month.

NAVY ACTIVE END STRENGTHS

QUESTION: Page 1-2 shows an increase in active fleet ships from 506 to 526. Which of these ships added to the active fleet would be manned by active Navy personnel? What is the level of ships force to be assigned to each of these ships?
ANSWER: The increase of twenty ships (506 to 526) in FY 1984 is a net result of ship commissionings and decommissionings as listed below.

The following sixteen ships, to be manned by active duty Navy personnel, will be commissioned:

- New Trident Submarine (SSBN)
  - SSBN 729 Georgia
- New Nuclear Propulsion Submarines (SSN's)
  - SSN 707 Portsmouth
  - SSN 708 Minneapolis-St. Paul
  - SSN 709 unnamed
  - SSN 716 Salt Lake City
  - SSN 717 unnamed
- New Guided Missile Frigates (FFG's)
  - FFG 38 Curts
  - FFG 40 Halyburton
  - FFG 41 McClusky
  - FFG 43 Thach
  - FFG 45 Dewert
  - FFG 46 Rentz
  - FFG 47 Nicholas
  - FFG 48 Vandergrift
  - FFG 49 Robert G. Bradley
- New Guided Missile Cruiser (CG)
  - CG 48 Yorktown

The following six ships, to be manned entirely by civilians, will be commissioned:

- New Ocean Surveillance Ships (TAGOS)
  - TAGOS 1 Stalwart
  - TAGOS 2 Contender
  - TAGOS 3 Vindicator
  - TAGOS 4 Triumph
  - TAGOS 5 Assurance
  - TAGOS 6 Persistent
- New Underway Replenishment Ship (TAFS)
  - TAFS 84-X Stromness

The following three SSN's will be going to an inactive status (decommissioned):

SSN 598 George Washington
SSN 601 Patrick Henry
SSN 618 Thomas Jefferson

DEPARTMENT OF THE NAVY
MILITARY MANPOWER CHANGES IN END STRENGTH
FY 1983 through FY 1984

Fiscal Year 1983 End Strength	572338
Decrease Support of other Nations International Activities	- 10
Increase manning Management Headquarters (International)	+ 31
Increase Foreign Military Sales Training Program	+ 1
Decrease manning Fleet Ballistic Missile System (SSBN's)	- 389
Increase manning Fleet Ballistic Missile System Support Ships	+ 15
Increase manning for New Trident Submarines	+ 648
Increase Support for Trident Submarines Facilities	+ 85
Increase manning Fleet Ballistic Missile Control System Communications	+ 55
Increase manning Operational Headquarters Manning (Offensive)	+ 15
Increase manning Base Communications at SUBASE Kings Bay	+ 5
Increase manning Base Operations (Offensive) at SUBASE Kings Bay	+ 37
Decrease manning NAVSPASUR DET NORAD	- 1
Decrease manning at LANTCOM Activities	- 13
Decrease manning at EUCOMSPECACT-MAINZ GERMANY	- 1
Increase manning Joint Communications Support Element	+ 10
Decrease manning Rapid Deployment Joint Task Force	- 3
Increase manning Management Headquarters (LANTCOM)	+ 9
Decrease manning Management Headquarters (PACOM)	- 1
Increase manning on CV's and CVN's	+ 1037
Increase manning A-6 Squadrons	+ 116
Decrease manning A-7 Squadrons	- 723
Increase manning F/A-18 Attack Squadrons	+ 510
Decrease manning F-4 Squadrons	- 238
Increase manning F-14 Squadrons	+ 603
Decrease manning COD Squadrons	- 8
Increase manning VAW 127	+ 134
Increase manning VAQ Squadrons	+ 78
Increase manning VQ-1	+ 30
Increase manning Fleet Readiness Squadrons	+ 198
Increase Student manning Fleet Readiness Squadrons	+ 175
Increase manning Aircraft Intermediate Maintenance Dept.	+ 570
Pre-commission BB-61 IOWA	+ 1515
Increase manning on Battleships	+ 8

Commission CG-48 Yorktown	+ 288
Precommission CG-49	+ 46
Increase manning on Cruisers	+ 2
Decrease manning on DDG's	- 7
Increase manning on DD's	+ 139
Transfer 3 FFG's to Naval Reserve Fleet	- 579
Commission 9 FFG's	+ 1206
Increase manning on FFG's	+ 160
Increase manning on FF's	+ 180
Decrease manning at PHMRON TWO	- 1
Increase manning on AD Support Ships	+ 253
Decrease manning SH-3 Squadrons	- 5
Precommission HSL 42	+ 57
Decrease manning HSL 33, 35 & 37	- 3
Decrease manning ASW Readiness Squadron Support	- 137
Increase manning ASW Readiness Squadrons	+ 101
Increase manning ASW Students at CRAW/CRAGS	+ 208
Decommission 3 SSN's	- 389
Commission 5 SSN's	+ 124
Increase manning on SSN's	+ 82
Increase manning Submarine Support Forces	+ 250
Increase Mine Support Operations	+ 8
Decrease manning Undersea Surveillance Systems	- 164
Increase manning Ship Towed Array Surveillance Systems	+ 58
Precommission LSD-41 WHIDBEY ISLAND	+ 124
Decommission two LSD's	- 677
Increase Assault Ships manning	+ 25
Commission Seal Team THREE	+ 182
Decrease manning Special Warfare Forces	- 34
Increase manning Explosive Ordnance Disposal Forces	+ 117
Increase manning Underway Replenishment Ships	+ 45
Decrease manning Major Fleet Support Ships	- 35
Commission HC-5	+ 202
Increase manning HS-1 Sea Component	+ 122
Increase manning Direct Support Squadrons - ACFT	+ 135
Increase manning Special Combat Support	+ 1
Decrease manning Naval Construction Staffs	- 8
Increase manning Shore Intermediate Maintenance Activities	+ 398
Decrease manning at Main&Sup Subase Pearl Harbor and NAVSUBSUPFACNLON	- 106
Increase manning at several Fleet Logistics Support Activities (MOTU's)	+ 40

Increase manning Cover and Deception Program	+	38
Increase manning at Numerous SECGRU Activities	+	77
Increase manning Electronic Warfare Support Project	+	17
Increase Staff manning for Fleet Support Training	+	9
Increase Student/Trainee manning for Fleet Support Training	+	7
Decrease manning in Operational Headquarters (Fleet)	-	6
Increase manning Operational Headquarters (Sea Control-Projection)	+	28
Increase manning Operational Headquarters (Sea Control-Air)	+	91
Decrease manning Operational Headquarters (Sea Control-Surface)	-	31
Increase manning Operational Headquarters (Sea Control-Subsurface)	+	15
Decrease manning PME-120 C-3 ENG D&S Patuxent River	-	54
Increase manning FOSIF and NCCS Activities	+	22
Increase manning COMTHIRDFLT FHLT	+	2
Decrease manning at Fleet Control Centers	-	8
Increase manning Navy Command & Control System	+	6
Decrease manning at NAVTACINTEROPSUPPACT SDGO	-	1
Increase manning Real Property Maintenance NS ROTA SPAIN	+	1
Decrease Base Communications manning at FLEACT OKINAWA, NAF ATSUGI, NAF LAJES, AND NAS JAX	-	5
Decrease Base Operation manning at Naval Air Bases	-	345
Increase manning Management Headquarters (Fleet)	+	13
Increase manning Real Property Maint-Flt Support (Surface) at NS PEARL HARBOR and NS SAN DIEGO	+	19
Increase Base Communications manning - FLTSUPPORT (Surface) at NAVSTA Guantanamo	+	10
Decrease Base Communications manning - FLTSUPPORT (Surface) at NAVSTA Charleston	-	1
Decrease Base Operations manning - FLT Support (Surface)	-	267
Increase Management HQ manning (SeaControl/Projection) at COMNAVAIRLANT and COMNAVAIRPAC	+	13
Decrease Base Operations manning - FLT Support (Subsurface)	-	16
Decrease manning Management Headquarters (Surface)	-	2
Decrease manning Real Property Maint - Flt Logistics Support	-	4
Decrease manning Base Operations - Flt Logistics Support	-	94
Increase manning Management Headquarters (Subsurface)	+	30
Increase manning Base Ops - Other Base Support at NAVFAC's and NAVACTS	+	115
Increase manning Base Ops - Other Base Support at PERSUPPDETS/PERSUPPACTS	+	100
Increase manning for Helicopter/Tactical Combat Support (MAW)	+	30
Increase Navy manning with Marine Divisions	+	49
Increase manning Force Service Support Group (FSSG) (Marine)	+	56
Increase Navy manning for Marine Base Operations	+	10
Decrease manning for TOMAHAWK Cruise Missile Program	-	1
Drop manning at TRITAC Joint Test Element	-	3
Decrease manning Combat Development Support	-	3
Increase manning at numerous CSSNAVSECGRUACTS and NAVSECGRUDEPTS	+	89

Decrease Mobility Enhancement manning (TAKX-82A)	- 6
Decrease manning at NAVAVCEN Washington DC	- 1
Decrease manning Installation Audiovisual Support - Tactical	- 13
Increase manning Cryptologic Activities and Crypto Support	+ 54
Decrease Crypto Communications at NAVSECSTA Washington DC	- 1
Increase Management HQ (CRYPTO) at COMNAVSECGRU WASH DC	+ 10
Increase manning NFOIO Suitland MD	+ 8
Increase manning Intelligence Support Center NISC, WASH DC	+ 6
Decrease manning for Prairie Wagon	- 2
Increase manning for Prairie Schooner	+ 1
Increase European Command GDIP manning	+ 47
Increase Pacific Command GDIP Manning	+ 3
Increase Atlantic Command GDIP Manning	+ 31
Increase Fleet Intelligence Support Manning	+ 1
Increase manning NORAD/ADCOM IDHS Division	+ 8
Increase ADP GDIP Support manning	+ 4
Decrease manning Intel Comm & Def Special Security System	- 58
Increase manning Integrated Automated Intel Processing System	+ 4
Increase Satellite Communications manning	+ 90
Increase Long Haul Communications manning	+ 18
Increase manning PME-120-3 NAVELEX/WWMCCS ADP	+ 1
Increase manning WWMCCS Information System	+ 34
Increase manning Base Operations - Communications	+ 3
Increase manning Management HQ (Comm Support) at COMSUBLANT	+ 10
Increase manning at COMSEC Activities	+ 2
Decrease manning at Management Headquarters (COMSEC)	- 2
Increase manning Management Headquarters (Comm) at COMNAVTELCOM	+ 8
Increase manning Special Collection Activities	+ 6
Increase manning Weather Service Activities	+ 7
Increase manning Oceanographic Activities	+ 3
Increase manning NAVSTAR GPS	+ 1
Increase manning Service Support to NSA	+ 40
Increase manning Service Support to Defense Activities	+ 16
Decrease manning Management Headquarters (Auxiliary Forces)	- 1
Decrease manning Military Sealift Command Area Headquarters	- 3
Increase manning Management Headquarters (Sealift)	+ 29
Decrease manning Reserve A-7 Squadrons	- 87
Increase manning Reserve F/A-18 Attack Squadrons	+ 87
Increase manning Reserve Reconnaissance Squadrons	+ 10
Increase manning Reserve ASW Patrol Squadrons	+ 2

Strike Two Reserve Destroyers - Non-Missile	- 172
Transfer Three FFG's to Naval Reserve Fleet	+ 350
Decrease manning Reserve Mine Counter Measures Forces	- 2
Increase manning COMSPECBOATRON ONE	+ 1
Decrease manning ARS-38 BOLSTER	- 29
Increase manning Reserve Direct Support Squadrons ACFT	+ 157
Increase manning Reserve SIMA NAVRESMAINTRAFAC's	+ 204
Decrease manning Reserve Operational Headquarters (Sea Control-Surface)	- 11
Increase manning Reserve Base Operations - Other Naval Reserve	+ 29
Increase manning Reserve Base Operations - Reserve Air Bases	+ 289
Increase manning Management Headquarters (Field NAVRES)	+ 17
Increase manning at R&D Labs (Industrially funded)	+ 2
Increase manning at R&D Facilities/Installation Support Activities	+ 16
Increase manning at RDT&E Ship and ACFT Support Activities	+ 7
Increase manning at Office of Naval Research Wash DC	+ 2
Decrease Service Support to DNA	- 1
Decrease manning at Supply Depots/Operations Activities	- 4
Increase manning at Inventory Control Point Operations	+ 58
Decrease manning for Procurement Operations	- 2
Increase manning for Depot Level Maintenance (NARF's)	+ 7
Decrease manning at Missile Facilities	- 17
Decrease manning at NAVAIRENGCEN Lakehurst	- 2
Decrease manning at Ship Maintenance Activities	- 2
Decrease manning at Naval Ordnance Activities	- 9
Increase manning at Information Automation Facilities (NARDAC/NAVDAF)	+ 454
Decrease manning at General Purpose Forces Electronic Support Activities	- 3
Increase manning for Surveillance System Electronic Support	+ 1
Decrease manning for Support of Commissary Retail Sales	- 10
Increase manning Base Operations - Logistics - Navy	+ 2
Increase manning Management Headquarters (Logistics)	+ 1
Increase manning at Logistics Support Activities	+ 39
Increase manning at FSO DAVIS - Monthan Arizona	+ 1
Increase manning at Maintenance Support Activities	+ 2
Increase Real Estate & Construction Administration manning	+ 80
Decrease manning Information Automation Activities	- 448
Increase manning at Recruiting Activities	+ 4
Decrease manning at Recruit Training Units	- 163
Increase manning at Naval Academy Annapolis	+ 16
Decrease manning at Officer Candidate School Newport	- 95
Increase manning at ROTC Units	+ 82

Increase manning Other College Commissioning Programs	+ 240
Increase manning General Skill Training	+ 125
Increase manning General Intelligence Skill Training	+ 5
Increase manning in Crypto/Sigint Related Skill Training	+ 19
Decrease manning Undergraduate Pilot Training - Staff	- 43
Decrease manning Undergraduate Pilot Training - Student/Trainee	- 3
Increase manning Undergraduate NFO Training - Staff	+ 112
Increase manning Undergraduate NFO Training - Student/Training	+ 9
Increase manning AVT-16 LEXINGTON	+ 3
Decrease manning Professional Military Education - Staff	- 19
Decrease manning Progessional Education - DOD Institutions - Staff	- 1
Increase Professional Education - DOD Institutions - Students	+ 96
Decrease manning for Support of Training Establishment	- 12
Increase manning Real Property Maintenance - Training - NAS Kingsville	+ 1
Decrease manning Base Communications - Training	- 2
Increase manning Base Operations - Training	+ 53
Increase manning Management Headquarters (Training)	+ 2
Decrease manning Construction Battalion Unit 403	- 1
Increase Education & Training - Health Care - DOD INST - Staff	+ 45
Increase Education & Training - Health Care - DOD INST - Students	+ 321
Increase Medical Care in Regional Defense Facilities	+ 1061
Increase manning in Other Health Activities	+ 46
Increase manning in Dental Care Activities	+ 33
Increase manning at Station Hospitals & Medical Clinics	+ 1522
Increase manning Real Property Maintenance - Health Care	+ 8
Increase manning Base Operations - Health Care	+ 91
Increase Health Care Management Headquarters at BUMED Navy Dept	+ 6
Increase manning in Other Personnel Activities	+ 49
Net increase in Personnel Holding Account - Patients (+24), Prisoners (+664),	+ 688
Force Structure Deviation - End Inventory Adjustment	- 48
Increase in Transient Account	+ 1008
Increase Service Support to USUHS Bethesda	+ 15
Increase Training Support to Centestsite Det Bangor	+ 3
Increase Training Support to Other Units	+ 29
Increase manning Dantes Pensacola Fla	+ 1
Decrease manning Service Wide Support	- 11
Decrease manning in Public Affairs Offices	- 3
Increase manning at Personnel Administration Activities	+ 63
Decrease manning Base Operations - Administration	- 8
Increase Service Support to Non DOD - Reimbursable	+ 1

Increase manning Management Headquarters (Departmental)	+ 68
Increase manning Management Headquarters (Administrative)	+ 3
Fiscal Year 1984 End Strength	586046

NAVY ACTIVE END STRENGTHS

The level of military ships force to be assigned to each of these ships is:

Newly Commissioned Ship Types	Officer/Enlisted
SSBN	30/290
SSN	13/120
FFG	13/188
CG	22/328
TAGOS	0/0
TAFS	0/0

This does not reflect the FY 1984 requirements for precommissioning crews of ships to be commissioned after FY 1984.

QUESTION: Which Navy vessels manned by Active Navy personnel will be removed from the Active Fleet category during FY 1984? What are the total ships forces involved in these retirements?
ANSWER: Between FY 1983 and FY 1984, the following ships will be transferred to inactive status:

SSN 598 George Washington
SSN 601 Patrick Henry
SSN 618 Thomas Jefferson

The level of ships forces involved in these retirements is:

SHIP	OFFICER/ENLISTED
SSN 598	-12/-119
SSN 601	-12/-119
SSN 618	-12/-114
TOTAL	-36/-352

QUESTION: Of the end strength increases devoted to medical service where will these forces be stationed? What requirement is this increase designed to fulfull? Is this a new requirement?
ANSWER: The medical service end-strength increases are dedicated to station hospitals and clinics, regional medical facilities, and in support of Marine Land Forces. The following is a breakdown of medical growth:

BREAKDOWN OF MEDICAL GROWTH

	FY83-FY84
Regional Medical Facilities	+1,100
Station Hospitals and Clinics	+1,500
Other	+ 50
Land Forces (incl. Marines)	+ 100
Totals*	+2,700

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*Totals do not add due to rounding

The requirement increase is designed to improve medical wartime casualty care capability, active duty and dependent care, and to reduce our dependence on CHAMPUS. This is not a new requirement.

QUESTION: The Manpower Requirements Report for FY 1984 shows an increase in Support Activities. Excluding Medical Support, please explain the other increases.

ANSWER: A detailed listing of the manpower increases and decreases for Support Activities is shown below. These numbers support the figures displayed in the FY 1984 Defense Manpower Requirements Report. A summary of the increases and decreases in each of the categories shown is included.

SUPPORT ACTIVITIES

	FY83-FY84
BASE OPERATING SUPPORT	+1090
Decreased Manpower for Naval Air Stations	- 207
Increased Manpower for Naval Air Facilities	+ 31
Decreased Manpower for Naval Stations	- 260
Increased Manpower for Naval Support Activities	+ 3
Increased Manpower for Aircraft Intermediate Maintenance Departments	+ 570
Increased Manpower for USMC Support	+ 10
Decreased Manpower for Commissary Stores	- 10
Decreased Manpower for Navy Exchanges	- 18
Increased Manpower for Training Base Operations	+ 51
Increased Manpower for Construction Battalion Centers	+ 12
Decreased Active MPN Manpower for Reserve Base Operations (Including Training)	- 699
Increased Manpower for Station Hospitals and Clinics	+1621
Decreased Manpower for Audio Visual Support	- 14
MEDICAL SUPPORT (EXCLUDED AS DIRECTED BY QUESTION)	
PERSONNEL SUPPORT	+ 54
Increased Manpower for Recruiting and Examining Activities	+ 4
Drug and Alcohol Abuse Programs	+ 50
INDIVIDUAL TRAINING	+ 764
Increased Manpower for Recruit Training (Navy)	+ 19
Increased Manpower for Recruit Training (USMC)	+ 2
Increased Manpower for Specialized Training	+ 547
Decreased Manpower for Professional Training	- 20
Increased Manpower for Flight Training	+ 72
Increased Manpower for Service Academy and Related Support	+ 16
Increased Manpower for New ROTC Units	+ 82
Increased Manpower for Other Training Activities	+ 46
FORCE SUPPORT TRAINING	+ 203
Increased Manpower for Readiness Squadron	+ 198
Decreased Manpower for Readiness Squadron (ASW)	- 36
Increased Manpower for Other Force Support Training	+ 41

CENTRAL LOGISTICS	+ 148
Decreased Manpower for Naval Shipyards	- 2
Decreased Manpower for Ordnance Activities	- 9
Increased Manpower for Other Logistic Activities	+ 42
Increased Manpower for Logistic Support Activities	+ 117

CENTRALIZED SUPPORT ACTIVITIES	+ 33
Decreased Manpower for Support to Other Nations	- 10
Decreased Manpower for Combat Development	- 3
Decreased Manpower for Service Wide Support	- 14
Decreased Manpower for Public Affairs	- 3
Increased Manpower for Personnel Administration	+ 63

MANAGEMENT HEADQUARTERS	+ 230
Increased Manpower for International Military Organization	+ 31
Increased Manpower for Unified Commands	+ 8
Increased Manpower for Combat Commands	+ 80
Increased Manpower for Support Commands	+ 111

FEDERAL AGENCY SUPPORT	+ 1
Increased Manpower for Navy Support to Non-DOD Activities (Reimbursable)	+ 1

Base Operating Support

With the exception of medical support, the only significant increase in Base Operating Support (BOS) is in Aviation Intermediate Maintenance Departments, part of the manpower for which is being reprogrammed from other BOS activities. The primary increase in BOS manpower is due to medical growth in Station Hospitals and Clinics to correct shortfalls in our capability to provide casualty care in support of Navy and Marine Corps operational forces.

Personnel Support

The minor increases in military requirements for Personnel Support are for recruiting and Drug and Alcohol Abuse Programs.

Individual Training

Individual training increases by 764 staff billets in response to increasing workloads, specific examples of which are: Training staff which is added to accommodate the Sea/Air Mariner (SAM) expansion; Specialized Skill staff increases (+536) in response to a workload increase generated by the SAM, Naval Flight Officer and Medical/Dental Corps Program expansions, all of which will improve mission-related goals. Also, four new ROTC units, opening in FY 1984, require additional manpower.

Force Support Training

The greatest portion of the increase in Force Support Training is for the new Readiness Squadron of F/A-18 aircraft.

Central Logistics Support

The increases in Central Logistics result from increased requirements for inventory control points and the Navy Maintenance and Support Systems Office.

Centralized Support Activities

Centralized Support Activities increases are mainly in the area of Aviation Logisitics Support and for Contract Administrators for the Military Construction Program.

Management Headquarters

The Management Headquarters manpower increase supports increased requirements for NATO, JCS, Fleet (Surface, Subsurface, Aviation) Headquarters, and Support Headquarters (i.e., Health Care, Cryptologic Management, Chief of Naval Operations, Training, Research and Development, Communications, and Reserve Command Headquarters). This increase also reflects twenty-nine end strengths for the Military Sealift Command.

QUESTION: The petty officer strength has increased by 20,243 from 1981 to 1983. What is the current shortfall? If the 1984 request is filled, will this eliminate any petty officer shortfall? Please provide the current estimate on petty officer shortfalls for FY 1985 through 1988.

ANSWER: At the end of FY 1982, the total shortfall in the TOP-6 enlisted paygrades was 17,441 and is projected to be 11,700 at the end of FY 1983. This improvement has resulted from the increased retention we have experienced for the last two years. If the 1984 Presidential Budget request is funded as requested, the petty officer shortfall will decline to approximately 9,200. FY 1983 through FY 1988 estimates of the petty officer shortfall are:

1983	1984	1985	1986	1987	1988
11,700	9,200	8,600	4,400	2,200	ELIMINATED

INCENTIVE PAY

QUESTION: Please explain the new payment program for aviators.

ANSWER: A modified aviation bonus payment plan was contained in the Senate version of the "Uniformed Services Pay Act of 1982", and subsequently reintroduced as a provision of the "Omnibus Military Personnel Act of 1983". Navy supports the modified plan since it will more closely focus bonus payments on critical retention points and result in a more efficient expenditure of bonus dollars.

Specific facets of the proposed payment plan are:

- A reduction in the bonus eligibility window from the 6th through the 15th to 6th through 10th years of service.
- Contracts of 3, 4 or 6 year periods.

- Fixed amount bonuses of $4,000 per year for 3 year contracts or $6,000 per year for 4 or 6 year contracts.
- No repeat bonus contracts (one time eligibility)
- Authority for continued bonus payment to both pilots and NFOs.

CAREER SEA PAY

QUESTION: What has increased the numbers and pay rate for career sea pay since last year's budget submission? (for FY 1982 and 1983)

ANSWER: The career sea pay program has done much to enhance sea duty for middle grade officers and petty officers. The Navy has experienced an increase in both requests for assignment to sea duty and requests by members to extend their transfer date in order to remain on shipboard assignments. The increase in the number of members who receive career sea pay is indicative of the improved at sea manning. The small increase in career sea pay rates per person is an indication of the increased shipboard experience level of the recipients.

COMMAND RESPONSIBILITY PAY

QUESTION: Please list the positions which qualify for responsibility pay. Please also explain the rationale for this payment.

ANSWER: Command responsibility pay affords the Navy the opportunity to provide those officers who command fleet units with the financial recognition they so richly deserve for their unusual responsibilities.

Duty at sea is particularly arduous. The commanding officer's duties at sea are an inescapable 24-hour-a-day job. Few individuals have the direct responsibility, requirement for continuous vigilance, and unusual attention to duty requirements as the at-sea commanding officer. The responsibility for hundreds or thousands of people and the pressure of having to effectively utilize and safeguard assets worth millions to billions of dollars cannot be abrogated by the seagoing commander. In contrast to their counterparts who may have administrative duties which are considered challenging, the at-sea commanding officer does not have the opportunity to obtain even a brief respite from his responsibilities.

The commanding officers of the following fleet units qualify for responsibility pay:

a. All active surface ships (floating drydocks excluded)

b. All active submarines including off-ship Fleet Ballistic Missile (FBM) submarine crews; officers in charge of the nuclear research submarine; deep submergence vessels and deep submergence rescue vessels; FBM test support unit and FBM navigation test unit.

c. All aviation squadrons and reserve force squadrons (excluding training command and fleet readiness squadrons, fighter weapons squadrons and the Navy flight demonstration squadron).

d. All unit commanders of the above commands including ship and submarine squadrons and groups; boat and craft units; Submarine Development Group ONE; Submarine Development Squadron TWELVE: Service Group ONE; Military Sealift Command Office Indian Ocean; wing commanders including carrier air wings (active and reserve).

e. Fleet Composite Operational Readiness Groups; underwater demolition teams; Sea Air Land (SEAL) teams; explosive ordnance disposal groups and mobile units; special warfare groups; construction battalions (active and Reserve); 30th Naval Construction Regiment; Mobile Mine Assembly Group Units.

f. Air Control Tactical Squadrons; Tactical Training Groups; fleet training groups; Naval Beach Groups; Amphibious Refresher Training Groups; Submarine Refit Training Groups.

MILITARY PERSONNEL, NAVY

QUESTION: In the FY 1983 budget submission the FY 1982 estimate for PCS was for $645,944,000. The actual expenditures reported this year was for $561,576,000. Please provide a detailed explanation for this change.

ANSWER:

Original estimate	$645,944,000
Temporary Lodging Expense - authorized but funds not appropriated	- 16,800,000
Accession moves less than planned due to improved continuation and retention which required accessions to be reduced.	- 1,335,000
Separation moves less than planned due to improved continuation and retention.	- 237,000
Organized unit moves less than planned.	- 15,999,000
Operational moves less than planned due to continuation of efforts to retour personnel in same geographic area.	- 8,626,000
Rates less than estimated - common carrier rates for household goods shipments were less than anticipated due to national economy and increased competition in trucking industry as deregulation took effect.	- 41,371,000
FY 1982 column of FY 1984 budget	$561,576,000

The experience from FY 1982 was taken into account in the preparation of the FY 1983 and FY 1984 PCS program costs reflected in the FY 1984 budget request.

SELECTIVE REENLISTMENT BONUS

QUESTION: Please provide a list showing the job classifications in which enlisted personnel are currently eligible to receive SRB payment. Also provide the percentage requirement filled in each of these categories, and the number of SRB recipients by category.

ANSWER: Navy is very selective in the application of the bonus to critical skills. The bonus is an extremely important element in Navy's effort to build and man a 600 ship Navy while at the same time eliminating a severe petty officer shortage which resulted because of inadequate retention in past years. The SRB program is carefully managed and bonus award levels are under constant review and adjusted at least semi-annually to ensure bonuses are awarded only where needed. The following table reflects the manning percentages by skill and zone, and the number of new payments in FY-83. Rating manning data for Zone A is computed for length of service cells 5 through 7; Zone B is computed for length of service cells 8 through 10, and Zone C is computed for length of service cells 11 through 13. This reflects DOD guidelines to evaluate manning in a zone by examining three adjacent years of inventory. Manning data for skills defined by Navy Enlisted Classifications (NEC) are computed using total inventory and requirements. Zone manning is only one characteristic of a skill that is used to qualify the need for a bonus. Other criteria include shortages in total career manning, training/ replacement costs, retention trends in one eligibility zone as well as through the entire skill manning envelope, military criticality of the skills, and attractiveness of the skill as compared to other military and civilian alternatives. In some cases, it is necessary to overman a skill in a particular zone to compensate for severe undermanning in other zones. For example, the Zone A manning for Boiler Technician is 137 percent, however, the career manning for the skill is only 74 percent. A similar situation exists in the nuclear field. Surface ship nuclear power plant operator (reactor control - 3383) is manned at 112 percent but the supervisor level of the same skill is manned at 44 percent. Unless a sufficient journeyman base is established to eliminate supervisor shortages, the skill will always be undermanned. Overall, the skill is manned at 88 percent. The skills listed are from Navy's current award level program. The following amplifying notes explain why bonuses are applied when manning is greater than 100%.

Notes:
1. Highly marketable skill regardless of unemployment conditions.
2. Undesirable or arduous working conditions.
3. High training and replacement costs mandate need for high retention.
4. Criticality of strategic forces requires satisfactory manning levels over entire skill spectrum.
5. Bonus application required to ensure sufficient retention to sustain adequate career force.
6. Bonus application required to compensate for overall skill undermanning.
7. Total skill consists of 21 persons. Without bonus application, manning would drop to unacceptable level (83%) by end of year. A critical national intelligence requirement exists for experienced personnel in this skill.
8. Total skill consists of 16 persons. Without bonus application, manning would drop to an unacceptable level (66%) by end of year.
9. SRB is targeted to zone A and B where manning is 57%. Inventory includes supervisory personnel who are filling supervisor billets and are no longer assigned as teletype repairman. The supervisors in zone C are not SRB eligible.
10. Overall manning of operator/supervisor skill NECs is less than 100%. Manning base of journeymen will provide qualified supervisors in the near future.
11. Bonus applied due to extremely poor retention and undermanning in Length of Service cells (LOS) 7 through 16. Overall manning surplus is a result of LOS cells 16 through 22 being overmanned. Upon retirement of the senior personnel in this skill, the rating will be severely undermanned.
12. An SRB award level 1 was applied in zone A on 15 May 1980 because of undermanning. The application of the bonus helps resolve the

personnel shortage. The bonus for this skill is scheduled to be deleted in June 1983.
13. Undermanned in zones B and C. Overall manning shortage.
14. Overall skill manning shortage (Paygrades E-1 through E-9)
15. Poor retention in zone A.
16. Skill scheduled to be eliminated from eligibility (zone A) June 83.
17. Skill requirements increasing to man 600 Ship Navy.
18. Low manning in Zone C, increased retention in zone B will provide partial compensation and build career force.

QUESTION: In which job classifications are enlisted personnel ineligible to receive SRBs? What are the current manning levels in these categories, and what percent the requirement is filled?
ANSWER: Navy applys the bonus to undermanned critical skills. The table provided reflects the skills, by zone, which do not receive a SRB. Manning data is computed for Zone A using length of service cells 5 through 7, Zone B using length of service cells 8 through 10, and Zone C using length of service cells 11 through 13. While several skills are experiencing poor manning and would therefore appear to be SRB eligible, other criteria are considered in the decision not to award a bonus. These are, total skill manning shortages, training and replacement costs, retention trends in a particular zone as well as over the entire skill, military criticality of the skill, and attractiveness of the skill as compared to other military and civilian alternatives. The following notes provide rationale for not applying a bonus even though inadequate manning indicates a bonus may be appropriate.

Notes:
1. Manning makes rating SRB eligible, but budget constraints prevent assigning a bonus. Other undermanned skills of higher technical nature, including stategic forces, have greater priority for bonus.
2. Retention is high without bonus application.
3. Entry level to skill at E-5/E-6 level. Results in poor Zone A manning.

SELECTIVE REENLISTMENT BONUS

Zone A

Skill (Rating)	Zone Manning	Overall Manning	Notes	FY-83 New Payments
Aviation Boatswain's Mate (ABE)	114.9	56.2	2, 5, 6	185
Air Traffic Controller (AC)	104.3	74.7	1, 3, 6	238
Aviation Fire Control Technician (AQ)	73.9	77.6	-	219
Aviation Support Equipment Technician (Electrical) (ASE)	88.2	60.6	-	37
Aviation Support Equipment Technician (Mechanical) (ASM)	117.4	53.6	13, 5, 6	44
Aviation Electronics Technician (AT)	86.5	78.6	-	765
Aviation Antisubmarine Warfare Operator (AW)	113.4	85.0	3, 5, 14	180
Aviation Antisubmarine Warfare Technician (AX)	66.7	68.9	-	96
Boiler Technician (BT)	137.0	74.1	2, 5, 6, 15	998
Construction Electrician (CE)	87.6	92.2	-	80
Cryptologic Technician (Interpretive) (CTI)	110.0	65.0	3, 5, 6, 16	48
Cryptologic Technician (Maintenance) (CTM)	101.5	70.6	3, 5, 6	145
Cryptologic Technician (Collection) (CTR)	123.7	77.7	5, 6	96
Cryptologic Technician (Technical) (CTT)	83.1	79.5	-	82
Data Systems Technician (DS)	99.3	74.6	-	219
Engineering Aid (EA)	98.6	88.2	-	34
Electrician's Mate (EM)	96.2	81.1	-	934
Electronics Technician (ET)	135.8	77.8	1, 3, 6, 13	983
Electronics Warfare Technician (EW)	91.5	80.2	-	115
Fire Control Technician (Ballistic Missile Fire Control) (FTB)	102.6	76.6	1, 4, 6	67
Fire Control Technician (Gun Fire Control) (FTG)	76.2	65.4	-	327
Fire Control Technician (Missile Fire Control) (FTM)	87.2	54.2	-	291
Gunner's Mate (Guns) (GMG)	95.2	51.5	-	166
Gunner's Mate (Missiles) (GMM)	100.0	58.7	1, 6	122
Gunner's Mate (Technician) (GMT)	113.3	75.6	2, 6, 14	208
Gas Turbine Systems Technician (Electrical) (GSE)	53.1	51.7	-	32
Gas Turbine Systems Technician (Mechanical) (GSM)	131.6	61.1	1, 3, 6, 13,17	86

SELECTIVE REENLISTMENT BONUS

Zone A

Skill (Rating)	Zone Manning	Overall Manning	Notes	FY-83 New Payments
Hull Maintenance Technician (HT)	101.2	67.2	2, 5	790
Interior Communications Electrician (IC)	83.6	60.7	-	490
Instrumentman (IM)	61.1	58.1	-	26
Molder (ML)	45.2	62.1	-	2
Machinist's Mate (MM)	114.5	85.6	2, 5, 15	1,516
Machinery Repairman (MR)	75.8	56.6	-	172
Mess Management Specialist (MS)	83.6	81.7	-	967
Missile Technician (MT)	135.0	77.5	3, 4, 6, 17	151
Opticalman (OM)	52.6	65.3	-	31
Operations Specialist (OS)	78.4	84.2	-	524
Patternmaker (PM)	108.0	58.9	6, 13, 14	13
Quartermaster (QM)	96.2	65.3	-	290
Radioman (RM)	95.9	77.7	-	808
Signalman (SM)	98.9	69.6	-	180
Sonar Technician (Surface) (STG)	87.2	71.8		345
Sonar Technician (Submarine) (STS)	101.5	80.7	1, 3, 4	281
Torpedoman's Mate (TM)	97.2	85.0	-	309

SELECTIVE REENLISTMENT BONUS

Zone B

Skill (Rating)	Zone Manning	Overall Manning	Notes	FY-83 New Payments
Aviation Boatswain's Mate (ABE)	90.6	56.2	-	87
Air Traffic Controller (AC)	81.0	74.7	-	155
Aviation Ordnanceman (AO)	81.3	71.4	-	245
Aviation Fire Control Technician (AQ)	79.4	77.6	-	109
Aviation Support Equipment Technician (Electrical) (ASE)	75.6	60.6	-	18
Aviation Electronics Technician (AT)	97.0	78.6	-	467
Aviation Antisubmarine Warfare Operator (AW)	82.7	85.0	-	142
Aviation Antisubmarine Warfare Technician (AX)	63.6	68.9	-	64
Boiler Technician (BT)	91.9	74.1	-	537
Builder (BU)	46.3	92.2	-	48
Construction Electrician (CE)	51.0	96.8	-	32
Construction Mechanic (CM)	45.0	86.1	-	40
Cryptologic Technician (Interpretive) (CTI)	111.1	65.0	3, 5, 6, 18	51
Cryptologic Technician (Maintenance) (CTM)	80.6	70.6	-	84
Cryptologic Technician (Collection) (CTR)	103.9	77.7	5, 6, 18	85
Cryptologic Technician (Technical) (CTT)	75.0	79.5	-	77
Data Processing Technician (DP)	83.7	74.4	-	170
Data Systems Technician (DS)	82.2	74.6	-	129
Engineering Aid (EA)	45.3	88.2	-	9
Electrician's Mate (EM)	77.7	81.1	-	457
Engineman (EN)	76.3	68.0	-	281
Equipment Operator (EO)	41.5	102.4	5, 11	40
Electronics Technician (ET)	73.7	77.8	-	580
Electronics Warfare Technician (EW)	58.9	80.2	-	58
Fire Control Technician (Ballistic Missile Fire Control) (FTB)	90.7	76.6	-	48
Fire Control Technician (Gun Fire Control) (FTG)	51.7	65.4	-	102
Fire Control Technician (Missile Fire Control) (FTM)	63.6	54.2	-	180
Gunner's Mate (Missiles) (GMM)	71.1	58.7	-	71
Gunner's Mate (Technician) (GMT)	95.8	75.6	-	119
Gas Turbine Systems Technician (Electrical) (GSE)	64.1	51.7	-	34

SELECTIVE REENLISTMENT BONUS

Zone B

Skill (Rating)	Zone Manning	Overall Manning	Notes	FY-83 New Payments
Gas Turbine Systems Technician (Mechanical) (GSM)	54.0	61.1	-	47
Hull Maintenance Technician (HT)	74.4	67.2	-	415
Interior Communications Electrician (IC)	57.1	60.7	-	206
Instrumentman (IM)	51.0	58.1	-	14
Intelligence Specialist (IS)	54.7	66.4	-	53
Molder (ML)	74.1	62.1	-	7
Machinist's Mate (MM)	74.0	85.6	-	856
Mess Management Specialist (MS)	72.0	81.7	-	523
Missile Technician (MT)	98.2	77.5	-	102
Opticalman (OM)	70.7	65.3	-	4
Operations Specialist (OS)	72.5	84.2	-	308
Patternmaker (PM)	42.9	58.9	-	4
Quartermaster (QM)	67.4	65.3	-	158
Radioman (RM)	71.5	77.7	-	496
Signalman (SM)	74.8	69.6	-	135
Sonar Technician (Surface) (STG)	49.7	71.8	-	81
Sonar Technician (Submarine) (STS)	87.8	80.7	-	134
Steelworker (SW)	50.9	101.2	5	18
Torpedoman's Mate (TM)	73.1	85	-	216
Utilitiesman (UT)	71.4	98.7	-	39

SELECTIVE REENLISTMENT BONUS

Zone C

Skill (Rating)	Zone Manning	Overall Manning	Notes	FY-83 New Payments
Aviation Antisubmarine Warfare Technician (AX)	70.1	68.9	-	41
Boiler Technician (BT)	82.1	74.1	-	197
Data Systems Technician (DS)	61.2	74.6	-	35
Electronics Technician (ET)	49.2	77.8	-	279
Electronics Warfare Technician (EW)	43.2	80.2	-	35
Fire Control Technician (Ballistic Missile Fire Control) (FTB)	37.4	76.6	-	12
Fire Control Technician (Gun Fire Control) (FTG)	43.4	65.4	-	53
Fire Control Technician (Missile Fire Control) (FTM)	25.9	54.2	-	67
Gunner's Mate (Missiles) (GMM)	59.2	58.7	-	37
Gunner's Mate (Technician) (GMT)	63.9	75.6	-	32
Gas Turbine Systems Technician (Electrical) (GSE)	72.8	51.7	-	7
Gas Turbine Systems Technician (Mechanical) (GSM)	46.0	61.1	-	9
Hull Maintenance Technician (HT)	76.1	67.2	-	182
Interior Communications Electrician (IC)	76.7	60.7	-	90
Machinist's Mate (MM)	80.1	85.6	-	471
Missile Technician (MT)	70.2	77.5	-	27
Operations Specialist (OS)	86.6	84.2	-	169
Sonar Technician (Surface) (STG)	43.9	71.8	-	64
Sonar Technician (Submarine) (STS)	60.4	80.7	-	47

SELECTIVE REENLISTMENT BONUS

Skill (NEC)	Overall Manning	Notes	FY-83 New Payments
Analyst-Forecaster (AG-7412)	91.7	-	50
Aircraft Non-Destructive Inspector (AM-7225)	92.3	-	7
Pressure-Fired Boiler Operator (BT-4515)	50.6	-	6
Russian (CTI-9201/9230)	83.0	-	48
Spanish (CTI-9203/9233)	94.0	-	6
Arabic (CTI-9216/9236)	117.0	7, 3	8
Hebrew (CTI-9215/9235)	67.0	-	6
Korean (CTI-9212/9232)	107.0	8	6
NTDS Technician (DS-1615)	60.1	-	14
DD-963 Auxillary Technician (EN-4398)	48.7	-	4
SLQ-32 (V) 1&2 Technician (EW-1733)	67.2	-	31
SLQ-32 Technician (EW-1734)	60.0	-	12
SLQ-17A (V) 2 Technician (EW-1735)	55.6	-	2
Phalanx Technician (FTG-1127)	67.9	-	11
"5/54 MK 42 (GMG-0876)	86.2	-	87
"5/54 MK 45 (GMG-0877)	81.8	-	46
76MM/62 Caliber Gun Mount (GMG-0878)	90.6	-	11
Terrier Missile Technician (GMM-0986)	59.1	-	31
MK 26 Launcher (GMM-0989)	76.9	-	8
MK 13 Launcher (GMM-0991)	74.6	-	2
Non-Nuclear Welder (HT-4955)	92.8	-	40
Nuclear Power Plant Welder (HT-4956)	85.0	-	24
Gamma/x-ray Radiographer (HT-4932)	93.5	-	3
Gamma/x-ray Radiographer Inspector (HT-4933)	51.6	-	2
Non Destructive Test Inspector (HT-4935)	72.5	-	2
VT, MT and PD Examiner (HT-4936)	68.4	-	4
Ultrasonic Test Examiner (HT-4937)	66.7	-	2
Non Destructive Test Examiner (HT-4938)	52.1	-	2
Radiographer Test Inspector (HT-4939)	38.7	-	2
Air Intercept Controller (OS-0313)	81.3	-	33
Supervisory Air Intercept Controller (OS-0314)	07.0	-	1
Antisubmarine Air Controller (OS-0316)	98.5	-	17
NTDS Air Intercept Controller (OS-0318)	79.0	-	91

SELECTIVE REENLISTMENT BONUS

Skill (NEC)	Overall Manning Level	Notes	FY-83 New Payments
Supervisory NTDS Air Intercept Control (OS-0319)	62.8	-	28
NTDS Antisubmarine Air Control (OS-0321)	67.0	-	18
Communications System Technical Control Operator (RM-2318)	83.8	-	103
Communications System Technical Control Supervisor (RM-2319)	51.3	-	69
Teletype Repairman (RM-2342)	119.3	9	50
FFG-7 Class Sonar Technician (STG-0402)	44.4	-	5
SQS-53 ASW Fire Control Technician (STG-0473)	51.4	-	2
SQS-53 ASW Fire Control Technician ASROC (STG-0474)	89.5	-	14
SQS-53 ASW Fire Control Technician ASROC (STG-0475)	47.2	-	1
SQS-23 ASW Fire Control Technician ASROC (STG-0477)	27.1	-	2
SQS-26A Technician (STG-0481)	34.5	-	2
SQS-26B Technician (STG-0482)	100.0	5	4
SQS-26C (STG-0483)	53.2	-	14
SQS-26BX ASW Fire Control Technician (STG-0492)	23.8	-	1
Nuclear Power NEC's			
Sub Plant Operator-Welder (3351)	181.0	1,3,4,5,10	29
Sub Plant Operator-Reactor Control (3353)	119.1	1,3,4,5,10	199
Sub Plant Operator-Electrical (3354)	120.6	1,3,4,5,10	212
Sub Plant Operator-Mechanical (3355)	140.1	1,3,4,5,10	282
Sub Plant Operator-Eng. Lab Tech. (3356)	168.6	1,3,4,5,10	84
Sub Plant Operator-Special Category (3359)	81.3	-	58
Sub Plant Supervisor-Welder (3361)	35.5	-	11
Sub Plant Supervisor-Reactor Control (3363)	73.2	-	155
Sub Plant Supervisor-Electrical (3364)	58.7	-	97
Sub Plant Supervisor-Mechanical (3365)	55.2	-	90
Sub Plant Supervisor-Eng. Lab Tech. (3366)	50.4	-	48
Surface Plant Operator-Reactor Control (3383)	112.1	1,3,5,10	54
Surface Plant Operator-Electrical (3384)	162.2	1,3,5,10	58
Surface Plant Operator-Mechanical (3385)	131.9	1,3,5,10	62
Surface Plant Operator-Eng. Lab Tech. (3386)	167.1	1,3,5,10	36
Surface Plant Operator-Special Category (3389)	79.0		9
Surface Plant Supervisor-Reactor Control (3393)	44.2	-	12

SELECTIVE REENLISTMENT BONUS

Skill (NEC)	Overall Manning Level	Notes	FY-83 New Payments
Surface Plant Supervisor-Electrical (3394)	42.8	-	14
Surface Plant Supervisor-Mechanical (3395)	35.6	-	25
Surface Plant Supervisor-Eng. Lab. Tech. (3396)	31.3	-	11
Special Warfare NEC's			
Saturation Diver (5311)	80.7	-	34
Underwater Demolition (UDT-5321)	81.8	-	47
Underwater Demolition/Explosive Ordnance (5322)	11.4	-	4
Sea, Air and Land Warfare (SEAL-5326)	95.7	-	80
Sea, Air and Land Warfare/Explosive Ordnance (SEAL/EOD 5327)	82.8	-	4
Explosive Ordnance (EOD 5332/5333)	89.0	-	27
First Class Diver (5342)	69.1	-	19
Second Class Diver (5343)	64.5	-	71
Special Operations Tech (HM-8492)	62.4	-	7
Diving Med. Tech (HM-8493)	91.7	-	14
Aero Med Tech (HM-8406)	101.0	12	72
Skill (NEC)			
Preventative Med Tech (HT-8432)	89.3	-	75
X-Ray Tech (HM-8452)	86.5	-	42
Adv. Lab Tech (HM-8506)	79.8	-	55
Nuc. Sub Med Tech (HM-8402)	99.0	5	35
Pharmacy Tech (HM-8482)	84.9	-	100
Advanced Ocular (HM-8445)	80.3	-	7
Advanced Bio Med Euip. Tech (HM-8478)	73.9	-	27

SELECTIVE REENLISTMENT BONUS

Zone A Skill	Zone Manning	Overall Manning	Notes
Aviation Boatswain's Mate (Fuels) - (ABF)	105.1	55.8	-
Aviation Boatswain's Mate (Aircraft Handling) - (ABH)	129.5	47.2	-
Aviation Machinist's Mate - (AD)	113.1	78.9	-
Aviation Electrician's Mate - (AE)	98.0	73.5	-
Aerographer's Mate - (AG)	129.3	68.6	-
Aviation Storekeeper - (AK)	94.8	69.8	-
Aviation Structural Mechanic (Safety Equipment) - (AME)	110.2	73.1	-
Aviation Structural Mechanic (Hydraulics) - (AMH)	114.4	71.7	-
Aviation Structural Mechanic (Structures) - (AMS)	117.2	71.3	-
Aviation Ordnanceman - (AO)	117.7	71.4	-
Aviation Maintenance Administrationman - (AZ)	91.4	73.2	-
Boatswain's Mate - (BM)	95.4	40.4	-
Builder - (BU)	123.2	108.3	-
Construction Mechanic - (CM)	103.6	108.5	-
Cryptologic Technician (Administrative) - (CTA)	94.8	89.2	-
Cryptologic Technician (Communications) - (CTO)	102.3	85.7	-
Disbursing Clerk - (DK)	76.4	70.0	1, 2
Illustration Draftsman - (DM)	90.5	45.8	-
Data Processing Technician - (DP)	110.0	74.4	-
Dental Technician - (DT)	142.4	88.0	-
Engineman - (EN)	108.3	68.0	-
Equipment Operator - (EO)	110.4	113.0	-
Intelligence Specialist - (IS)	121.7	66.4	-
Journalist - (JO)	128.4	60.4	-
Lithographer - (LI)	92.0	47.5	-
Legalman - (LN)	95.4	84.9	-
Master-at-Arms - (MA)	84.6	90.6	1, 2, 3
Mineman - (MN)	97.7	78.6	-
Musician - (MU)	103.7	75.5	-
Navy Counselor - (NC)	16.2	76.7	1, 2, 3
Ocean Systems Technician - (OT)	78.0	86.9	1
Postal Clerk - (PC)	78.8	52.8	1
Photographer's Mate - (PH)	155.5	77.9	-
Personnelman - (PN)	100.8	76.4	-

SELECTIVE REENLISTMENT BONUS

Zone A

Skill	Zone Manning	Overall Manning	Notes
Aircrew Survival Equipmentman - (PR)	100.9	86.2	-
Religion Program Specialist - (RP)	68.4	52.1	1, 2
Ship's Serviceman - (SH)	98.5	72.8	-
Storekeeper - (SK)	103.5	68.4	-
Steelworker - (SW)	97.5	104.9	-
Training Deviceman - (TD)	87.3	76.9	-
Utilitiesman - (UT)	142.7	98.7	-
Yeoman - (YN)	92.3	76.8	-
Zone B			
Aviation Boatswain's Mate (Fuels) - (ABF)	100.0	55.8	-
Aviation Boatswain's Mate (Aircraft Handling) - (ABH)	111.1	47.2	-
Aviation Machinist's Mate - (AD)	79.8	78.9	1, 2
Aviation Electrician's Mate - (AE)	72.9	73.5	1, 2
Aerographer's Mate - (AG)	71.8	68.6	1
Aviation Storekeeper - (AK)	82.8	69.8	1
Aviation Structural Mechanic (Safety Equipment) - (AME)	79.0	73.1	1
Aviation Structural Mechanic (Hydraulics) - (AMH)	90.2	71.7	-
Aviation Structural Mechanic (Structures) - (AMS)	94.4	71.3	-
Aviation Support Equipment Technician - (AS)	42.9	90.0	2, 3
Aviation Support Equipment Technician (Mechanical) - (ASM)	99.2	53.6	-
Aviation Maintenance Administrationman - (AZ)	72.8	73.2	2
Boatswain's Mate - (BM)	83.5	40.4	1
Cryptologic Technician (Administrative) - (CTA)	89.2	89.2	-
Cryptologic Technician (Communications) - (CTO)	103.9	85.7	-
Disbursing Clerk - (DK)	74.8	70.0	1, 2
Illustration Draftsman - (DM)	88.9	45.8	2
Dental Technician - (DT)	109.0	88.0	-
Gunner's Mate (Guns) - (GMG)	79.8	51.5	2
Journalist - (JO)	72.5	60.4	2
Lithographer - (LI)	98.6	47.5	-
Legalman - (LN)	66.4	84.9	2

SELECTIVE REENLISTMENT BONUS

Zone B

Skill	Manning Level	Overall Manning	Notes
Master-at-Arms - (MA)	69.0	90.6	2, 3
Mineman - (MN)	77.1	78.6	1, 2
Musician - (MU)	61.7	75.5	2
Navy Counselor - (NC)	39.6	76.7	2, 3
Ocean Systems Technician - (OT)	71.6	86.9	1
Postal Clerk - (PC)	82.2	62.8	1
Photographer's Mate - (PH)	58.8	77.9	1
Personnelman - (PN)	92.4	76.4	-
Aircrew Survival Equipmentman - (PR)	83.1	86.2	2
Religious Program Specialist - (RP)	40.3	52.1	2, 3
Ship's Serviceman - (SH)	94.5	72.8	-
Storekeeper - (SK)	101.5	68.4	-
Training Deviceman - (TD)	102.0	76.9	-
Yeoman - (YN)	86.2	76.8	-

Zone C

Skill	Manning Level	Overall Manning	Notes
Aviation Boatswain's Mate (Launching and Recovery Equipment - (ABE)	115.9	56.2	-
Aviation Boatswain's Mate (Fuels) - (ABF)	135.3	55.8	-
Aviation Boatswain's Mate (Aircraft Handling) - (ABH)	118.4	47.2	-
Air Traffic Controller - (AC)	92.8	74.7	-
Aviation Machinist's Mate - (AD)	102.8	78.9	-
Aviation Electrician's Mate - (AE)	91.8	73.5	-
Aerographer's Mate - (AG)	73.9	68.6	2
Aviation Storekeeper - (AK)	103.4	69.8	-
Aviation Structural Mechanic (Safety Equipment) - (AME)	107.5	73.1	-
Aviation Structural Mechanic (Hydraulics) - (AMH)	130.8	71.7	-
Aviation Structural Mechanic (Structures) - (AMS)	111.0	71.3	-
Aviation Ordnanceman - (AO)	89.2	71.4	-
Aviation Fire Control Technician - (AQ)	99.3	77.6	-

SELECTIVE REENLISTMENT BONUS

Zone C

Skill	Manning Level	Overall Manning	Notes
Aviation Support Equipment Technician - (AS)	160.2	90.0	-
Aviation Support Equipment Technician (Electrical) - (ASE)	57.5	60.6	1, 2
Aviation Support Equipment Technician (Mechanical) - (ASM)	82.5	53.6	1
Aviation Electronics Technician - (AT)	80.6	78.6	2
Aviation Antisubmarine Warfare Operator - (AW)	68.2	85.0	1
Aviation Maintenance Administrationman - (AZ)	98.8	73.2	-
Boatswain's Mate - (BM)	101.0	40.4	-
Builder - (BU)	76.2	108.3	-
Construction Electrician - (CE)	71.0	107.1	-
Construction Mechanic - (CM)	73.9	108.5	-
Cryptologic Technician (Administrative) - (CTA)	98.3	89.2	-
Cryptologic Technician (Interpretive) - (CTI)	58.8	65.0	1, 2
Cryptologic Technician (Maintenance) - (CTM)	31.5	70.6	2
Cryptologic Technician (Communications) - (CTO)	102.7	85.7	-
Cryptologic Technician (Collection) - (CTR)	53.4	77.7	2
Cryptologic Technician (Technical) - (CTT)	52.1	79.5	2
Disbursing Clerk - (DK)	64.0	70.0	1
Illustration Draftsman - (DM)	102.6	45.8	6
Data Processing Technician - (DP)	77.2	74.4	1, 2
Dental Technician - (DT)	115.7	88.0	-
Engineering Aid - (EA)	48.7	88.2	1
Electrician's Mate - (EM)	63.9	81.1	1
Engineman - (EN)	72.4	68.0	1, 2
Equipment Operator - (EO)	59.1	113.0	-
Fire Control Technician - (FT)	33.3	64.3	2, 3
Gunner's Mate - (Guns) - (GMG)	88.5	51.5	2
Hospital Corpsman - (HM)	93.9	88.5	-
Instrumentman - (IM)	77.1	58.1	1
Intelligence Specialist - (IS)	78.0	66.4	1
Journalist - (JO)	81.9	60.4	1
Lithographer - (LI)	97.9	47.5	-
Legalman - (LN)	76.7	84.9	2
Master-at-Arms - (MA)	96.6	90.6	-

SELECTIVE REENLISTMENT BONUS

Zone C

Skill	Manning Level	Overall Manning	Notes
Molder - (ML)	80.0	62.1	1, 2
Mineman - (MN)	132.8	78.6	-
Machinery Repairman - (MR)	86.2	56.6	1
Mess Management Specialist - (MS)	63.7	81.7	1
Musician - (MU)	114.3	75.5	-
Navy Counselor - (NC)	70.8	76.7	2, 3
Opticalman - (OM)	66.7	65.3	2
Ocean Systems Technician - (OT)	65.9	86.9	1
Postal Clerk - (PC)	132.1	52.8	-
Photographer's Mate - (PH)	57.0	77.9	1
Pattern Maker - (PM)	61.1	58.9	2
Personnelman - (PN)	86.2	76.4	1
Aircrew Survival Equipmentman - (PR)	98.9	86.2	-
Quartermaster - (QM)	74.6	65.3	2
Radioman - (RM)	81.3	77.7	2
Religion Program Specialist - (RP)	66.7	52.1	1
Ship's Serviceman - (SH)	141.1	72.8	1
Storekeeper - (SK)	76.1	68.4	-
Signalman - (SM)	82.7	69.6	1
Steelworker - (SW)	80.8	104.9	1
Training Deviceman - (TD)	103.4	76.9	-
Torpedoman's Mate - (TM)	82.2	85.0	2
Utilitiesman - (UT)	89.6	98.7	-
Yeoman - (YN)	95.3	76.8	-

SELECTIVE REENLISTMENT BONUS

QUESTION: Of the enlisted personnel receiving SRB's, provide a breakout showing what percent received payment at each level 1 through 6.

ANSWER:

AWARD LEVEL	ZONE A	ZONE B	ZONE C
0.5	7.1	10.7	40.5
1.0	7.2	8.0	24.2
1.5	8.1	5.9	6.3
2.0	5.7	7.7	18.9
2.5	10.7	9.3	3.7
3.0	15.3	20.6	3.5
3.5	8.7	3.9	1.0
4.0	9.5	10.6	0.3
4.5	10.4	14.1	0.0
5.0	10.6	4.9	0.1
5.5	0.0	0.0	0.0
6.0	6.7	4.3	1.5

Above data is end FY 1983 estimate. Effective 1 November 1982 Navy established maximum award level for Zone A at 5, Zone B at 5, and Zone C at 4. This policy was to encourage longer reenlistment to receive the $16,000 bonus ($20,000 for nuclear trained personnel). Data includes approximately 5,500 SRB related reenlistments which occurred in October 1982 prior to establishment of revised maximum award levels in November.

QUESTION: What percent of enlisted personnel who received reenlistment bonuses do not fulfill the terms of the agreement?

ANSWER: Less than one percent. For example, during the period 1 December 1981 to 30 November 1982, only 249 personnel who received a SRB required recoupment. Navy has an active program to recoup bonuses. Current directives to the field stipulate recoupment procedures. A follow-up system is in place to pursue collection of funds owed at discharge which could not be recovered due to insufficient funds available in a member's pay account on separation.

QUESTION: Of the 19,364 estimated anniversary payments in FY 1983, please breakout by year when the initial payments where made.

ANSWER:

FY-82	16,642
FY-81	64
FY-80	95
FY-79	816
FY-78	1,747
	19,364

QUESTION: Which job classifications eligible for reenlistment bonuses in FY 1983 will not be eligible in FY 1984?

ANSWER: Only those skills having requisite manning/retention shortfalls will receive SRB in FY-84. It is crucial to note that the current FY-83 plan is more targeted than the FY-82 plan. Comparing FY 1983 to FY 1982 shows 15 ratings dropped from Zone A eligibility and 16 ratings dropped from Zone B eligibility. It is anticipated that these ratings will not be returned to eligibility in FY 1984. The 1984 plan will be determined at the SRB review to be conducted in August 1983.

END STRENGTH INCREASES

QUESTION: The Air Force is requesting end strength increases of 20,100. In what geographical locations will these forces be assigned?

ANSWER: Those geographical locations that reflect a change in end strength as a result of the FY 1984 President's Budget are listed below:

United States	+16,600
Belgium	+500
Germany	+2300
Greece	+100
Italy	+200
Spain	-400
Turkey	-100
United Kingdom	+1100
Philippines	+100
Korea	+300
Misc	-600

STREAMLINING

QUESTION: Why can't the increased requirements for personnel (such as for GLCM, C^3 and intelligence programs) be met by streamlining headquarters management, base operating support, and other support activities?

ANSWER: Our support activities have already been streamlined through a continuing review of requirements conducted within our Management Engineering Program. Further, the FY 1984 program includes an 800 space reduction for anticipated additional economies and efficiencies. While the total Air Force has grown 10 percent since FY 1980, our management headquarters function has remained stable. As new weapon systems are added to the inventory to meet the growing threat to this nation we must continue to recognize and fund the additional support costs associated with those new systems. Fiscal constraints have intensified the competition, and thus the streamlining, of total manpower requirements; the manpower requested in the President's Budget reflects the minimum essential to support approved programs.

ELIGIBLE FOR UNEMPLOYMENT BENEFITS

QUESTION: Using the losses chart provided on page 8, in which categories would an individual be eligible to collect unemployment benefits?

ANSWER: Individuals in the ETS, Normal Early Release, Programmed Early Release and Retirement categories would be eligible for unemployment benefits. However, under Internal Revenue Code 20 USC 3304 unemployment compensation for retired servicemen will be offset by the amount of their retired pay; therefore, it is unlikely retired servicemembers would choose to draw unemployment compensation. In addition to the above, half of the individuals in the Attrition category could be eligible.

AVERAGE FLYING TIME

QUESTION: With respect to Aviation Career Officers, what is the average flying time per month of individuals receiving payment in this category? What percent of the recipients fly fewer than 5 hours per month? What percent fly more than 10 hours per month?

ANSWER: A number of individuals receiving flight pay as Aviation Career Officers are not currently assigned to operational flying positions and neither fly nor receive Operational Flying Duty Accumulation credit. We have limited the response, therefore, to those individuals currently in operational flying positions. Of this category, 19% averaged less than 5 hours per month for the period of November 1982 through January 1983. Sixtyfive percent of these individuals averaged more than 10 hours per month for that period. (In any period we would expect to see a portion of the flyers at the lower activity level due to temporary duty requirement, being grounded medically, etc.) The group average was 15.8 hours per month.

ACCELERATED PAYMENTS

QUESTION: For what specific reasons are enlisted personnel eligible to receive accelerated payments? Please provide a list showing the number of recipients and the rationale for receiving accelerated payments.

ANSWER: There are two ways an enlisted person may receive accelerated payments. The most frequent way is through separation before the term of enlistment is completed. The Department of Defense Pay Manual directs the Services that "unpaid installments of SRB are payable to members separated prior to completion of enlistment when separated under conditions which do not require recoupment." Of the 58 accelerated payments made in FY 1982, 48 were for the above reasons. The remaining 10 payments were made to enlisted members who were suffering financial hardship not experienced by contemporaries. The airmen had to document their financial problems and forward their justification to the Air Force Manpower and Personnel Center for approval.

SRB ANNIVERSARY FUNDS

QUESTION: How much does the Air Force expect to recoup in SRB anniversary funds in FY 1983 due to enlisted personnel failure to meet the terms of the agreement?

ANSWER: The Air Force cannot accurately determine how much will be recouped in FY 1983. We do have an aggressive recoupment program that seeks recoupment when justified and within the constraints of Public Law, Comptroller General decisions, and Department of Defense guidance. In FY 1982, we initiated recoupment for an amount in excess of $160,000. It would not be unreasonable to expect FY 1983 recoupment actions to exceed that number.

SRB PAYMENT AT EACH LEVEL

QUESTION: SRB recipients receive payment based on a rating of 1-6. Please break out what percentage SRB payment is at each level.

ANSWER: The Air Force pays multiples 1/2 through 4. For FY 83 and 84 the percentage programmed for each multiple is as follows:

FY 83

MULT	# PMTS	%
4	555	1.6
3	2,625	7.7
2	4,044	11.9
1	23,065	67.7
1/2	3,790	11.1
TOTAL	34,079	100.0

FY 84

MULT	# PMTS	%
4	541	1.6
3	3,297	10.1
2	4,246	13.0
1	23,020	70.4
1/2	1,596	4.9
TOTAL	32,700	100.0

ROTATIONAL TRAVEL

QUESTION: In what areas will the increased moves be taken? What will be the impact on the travel requirement assuming the cap on U.S. Forces in Europe is maintained?

ANSWER: We cannot determine at this time what the impact would be if the cap on U.S. forces in Europe is extended to FY 1984. We are still working with the JCS and OSD staffs on alternatives to meet this contingency. Until decisions are made on how the end strength constraints will be met we cannot estimate individual service impacts.

MARINE CORPS END STRENGTH

QUESTION: Why is the Marine Corps establishing two MAU Headquarters in FY 1984? What is the military manpower requirement associated with this initiative.

ANSWER: The Marine Corps has two MAUs continuously deployed, and two additional MAUs either preparing for, or rotating to or from a deployment. In the past, personnel for each MAU Headquarters (11 officers and 57 enlisted) were taken "out of hide" from the combat, combat support and combat service support units that supply the deploying troop elements. The permanent activation and manning of two MAU Headquarters in fiscal year 1983 and the additional two in fiscal year 1984 will eliminate "out of hide" manning. The resultant benefit is reduced personnel turbulence, higher average manning of the involved troop elements and higher levels of efficiency and effectiveness of the MAU Headquarters.

QUESTION: Please provide a breakout of manpower requirements by program explaining the rationale for increases and decreases from FY 1983 to FY 1984.

ANSWER: Marine Corps end strength increases by 2,700 from fiscal year 1983 to 1984. These additions will improve maneuverability, modernization, firepower, sustainability and readiness of Marine Amphibious Forces. Listed below by Defense Planning and Programming Categories is a comparison of the changes between fiscal years 1983 and 1984. A detailed breakout is contained on page V-13 of the Manpower Requirements Report, fiscal year 1984:

Fiscal Year 1984 Budget
(Manning in 000s)

	FY83	FY84	Change
Tactical/Mobility	116.3	118.5	+2.2
Support Activities	43.4	44.1	+0.7
Base Operating Support	20.5	20.7	+0.2
Individual Training	8.6	8.8	+0.2
Force Support Training	3.0	3.3	+0.3
Operating Strength Deviation	-2.0	+0.7	+2.7
Individuals	35.2	32.2	-3.0
Transients	7.9	7.8	-0.1
Students, Trainees	26.6	23.8	-2.8

Note: Detail may not add because of rounding

Tactical/Mobility Forces. The strength increases provide for improved air defense, artillery and light armored vehicle units and an increased anti-tank capability. Manpower is being added to existing air defense forces to provide a minimally acceptable level of air defense for active force units. The artillery increases support reorganization of existing units which are transitioning to the M-198 howitzer and the addition of self propelled artillery to bring all artillery regiments to the same level of capability by the end of the program period. A light armored vehicle unit will be added in fiscal year 1984. Two TOW missile platoons will be added as part of an ongoing program to increase the anti-tank capability of the Marine divisions. Further manning increases for the Fleet Marine Force include increased maintenance personnel for Light Armored Vehicles, motor transportation, electronics and ordnance, plus increases for bridge and port operations and liquid handling units. These combat service support increases will improve the readiness of the combat forces by improving overall maintenance and supply readiness.

Base Operating Support. Increases are to enhance the daily support provided to deployed forces. The specific increases provide for additional personnel in fire and rescue, data base management, teleprocessing and disbursing.

Individual Training. The increases are the result of the fielding of new equipment and increased formalized initial skill training. These increases will improve the combat readiness of the individual Marine and decrease critical skill shortages in the Fleet Marine Force.

Force Support Training. Fielding of new aircraft such as the F/A-18 and CH-53E caused increases in this category. Additional increases include the Mountain Warfare Training Center at Bridgeport, California, which provides mission essential cold weather and adverse terrain training.

Undermanning. The undermanning factor which only applies to end strength on 30 September, goes from a -2,000 in fiscal year

1983 to a positive 700 in fiscal year 1984. The change is the result of improvements in accession management.

Individuals. The Individuals change from 35,200 in fiscal year 1983 to 32,200 in fiscal year 1984. This decrease is the result of a level loading entry level training plan allowed by improved accession management.

QUESTION: What are the Active Component manpower savings associated with transferring Active Component units to the reserves in FY 1984 as mentioned in the Manpower Requirements Report FY 1984 (V-4)?

ANSWER: In order to offset structure growth, maximize resources (TOA) and provide for a balanced structure, 855 structure spaces will be transferred to the Reserves in fiscal year 1984:

1st Air Naval Gunfire Liaison Company (ANGLICO) (357 spaces)
2 Longshoremen Platoons (214 spaces)
2 Salvage Platoons (48 spaces)
2 Bridge Platoons (86 spaces)
1 Marginal Terrain Vehicle Company (150 spaces)

Since these billets are currently unmanned, there are no active component manpower dollar savings associated with the transfers. However, these actions will improve the manning percentage of the remaining active structure.

INCENTIVE PAY FOR HAZARDOUS DUTY

QUESTION: What are the eligibility requirements for receiving ACIP?

ANSWER: Entitlement to ACIP is based upon the frequent and regular performance of operational or proficiency flying duty required by orders. For purposes of determining entitlement to continuous ACIP, "Operational Flying" means flying performed in training that leads to the award of an aeronautical designation or flying performed under competent orders while serving in assignments in which basic flying skills normally are required. Within the Department of the Navy, aviation service begins on the day an individual first reports under competent orders to an aviation facility having aircraft in which the member will receive flight training leading directly to flight designation. This date is known as the Aviation Service Entry Date (ASED). Aviation service continues to accumulate from the ASED without exception as long as the individual's flight designation remains in effect.

An officer on extended active duty who holds an aeronautical rating is considered to be performing aviation service on a career basis as long as he is a designated aviator. A designated aviator receives credit for operational flying duty only during those periods when assigned to designated operational flying assignments.

ACIP entitlement is based on two phases of computation:

PHASE I: Years of Aviation Service (including Flight Training) as an Officer

Years	Monthly Pay
2 or less	$125
over 2	156
over 3	188
over 4	206
over 6 through the 18th year	400

PHASE II: Years of Commissioned Service

Years	Monthly Pay
over 18	$370
over 20	340
over 22	310
over 24	280
over 25	250

The ACIP Act of 1974 bases ACIP rates on length of an officer's aviation service rather than on his grade and total military service during the retention-critical, flight intensive period of a career. The highest ACIP rate is contained in the Phase I category. The ACIP Act also established progressively decreasing ACIP rates in the senior, less-flight-intensive years, based on commissioned service. These rates are contained in the Phase II category.

The ACIP Act of 1974 also established a set of operational flying time standards for entitlement to continuous ACIP. These standards require an officer qualified for aviation service to perform a certain number of operational flying years by certain fixed years of aviation service to receive ACIP. See following table:

Standards for ACIP Entitlement

Entitlement Status	Standard
Continuous ACIP (0-12 yrs)	An aeronautically designated officer or aviation student who has up to 12 years of aviation service.
Continuous ACIP (12-18 yrs)	An aeronautically designated officer who has from 12 to 18 years aviation service and has performed operational flying duties for at least 6 of the first 12 years of aviation service.
Continuous ACIP (18-22 yrs)	An aeronautically designated officer who has 18 or more years of aviation service and has performed operational flying duties for at least 9 but less than 11 years of the first 18 years of aviation service.
Continuous ACIP (18-25 yrs)	An aeronautically designated officer who has 18 or more years of aviation service and has performed operational flying duties for at least 11 of the first 18 years of aviation service.
Conditional ACIP (12-18 yrs)	An aeronautically designated officer who has from 12 to 18 years aviation service and did not perform operational flying duties for at least 6 of the first 12 years of aviation

	service. To be entitled to receive ACIP this officer must meet DoD Pay Manual flying requirements of 4 hours per month and be under DIFOPS (duty involving flight operations) orders.
Conditional ACIP (18-25 yrs)	An aeronautically designated officer who has completed 18 years of aviation service and did not perform operational flying duties for at least 9 of the first 18 years of aviation service; or an aeronautically designated officer who has completed 22 years of service as an officer and did not perform operational flying duties for at least 11 of the first 18 years of aviation service. To be entitled to receive ACIP this officer must meet DoD Pay Manual flying requirements of 4 hours per month and be under DIFOPS orders.

SELECTIVE REENLISTMENT BONUS (SRB)

QUESTION: Of the enlisted personnel receiving SRBs provide a breakout showing what percent receive payment at each level 1-6.

ANSWER: The following breakout shows percent of SRB reenlistments by award level:

Multiple	Percent
1	24
2	17
3	45
4	3
5	2
6	9
	100

The percentages are not static, but vary with each adjustment to multiples.

QUESTION: What specific circumstances allow an enlisted person to receive accelerated SRB payment?

ANSWER: Requests for accelerated payments are submitted to Headquarters Marine Corps and are approved or disapproved on an individual case basis. There is no exhaustive list of specific circumstances which lead to automatic approval. However, examples of emergency circumstances which normally warrant approval are medical, dental, or burial expenses; adoption or other unusual legal expenses; unexpected education requirements;

and financial losses caused by accident or natural disaster. A stated reason such as "to pay debts" is not sufficient unless specific substantiation is provided.

ENLISTMENT BONUSES

QUESTION: What accounts for the shifting to higher dollar amounts of enlisted bonuses paid since 1982? (In 1982 nearly 75 percent of all new payments were for $2,500. In 1983 and 1984 all new payments were $3,000 or higher.)

ANSWER: The low historical effectiveness of the $2,500 award level made it necessary to increase this level to $3,000 for fiscal year 1983. Two additional factors were responsible for the increase in bonus payment levels: First, there is an increased requirement for high quality enlistees to operate, repair and maintain newly acquired high technology equipment and weapons. Second, enlistment bonuses are being used to encourage more new Marines to enlist during the traditionally low input winter months. This leveling of enlistments allows us to better fill expensive formal school seats.

The bonus award levels are reviewed frequently to ensure optimal use of available bonus monies to effectively meet our entry-level training requirements.

SUBSISTENCE IN KIND

QUESTION: What caused the percentage increase used in calculating absenteeism in both CONUS and overseas dining facilities in the fiscal year 1984 budget submission?

ANSWER: The percentage rate increase used in calculating absenteeism in both CONUS and overseas dining facilities for the fiscal year 1984 budget submission is a result of the following factors:

a. Pay raises providing more disposable funds for discretionary spending of the individual Marines.

b. Increasing mobility of younger Marines (privately owned vehicles).

c. Availability of alternate and accessible eating establishments.

Military Personnel, Active Army Manpower ES Increases

Question: The Army reports that Division 86 requires a higher ratio of officers to enlisted personnel. If the Army requires a greater number of "combat related" officers, why can't officers be transferred from Headquarters Management/Administration to fill this requirement?

Answer: Currently, the Army is committing about 1,000 field grade officer positions to civilian status because of DOPMA constraints. These positions are primarily in Headquarters Management and Administration functions. Any plan to further reduce these functions by transferring officer positions to support Division 86 would impact adversely on the Army's command, control, and policy making functions.

Question: Along with the 2,800 increase in O-1, the Army is also requesting increases of O-4 through O-6. Are these increases justified by the Division 86 requirement? Please explain in which areas O-4 through O-6 increases are required.

Answer: Some small increase in field grade requirements is attributable to Division 86, however, the primary reason for the requested increase is to fill current requirements that can not be filled under current DOPMA constraints. At the end of FY 82 the Army was able to fill only 84.8% of its field grade requirements due to the constraints imposed by DOPMA on field grade inventory. Due to increases in the end strength, increased DOPMA limitations will allow the Army to fill 86.2% of it field grade requirement by FY 84. Additionally, the Army has taken action to reduce field grade requirements to near DOPMA levels with the exception of 1,000 O-4 positions. These 1,000 O-4 positions were deemed too critical to the Army's mission to either reduce to a lower grade or convert to a civilian position. With the programmed increase in field grade inventory in FY 84 and the reduction in field grade requirements the Army has now more closely aligned its field grade requirements with the constraints of the DOPMA legislation.

ACTIVE ARMY MANPOWER END STRENGTH INCREASES

QUESTION: In which geographical areas will the increased forces be deployed?

ANSWER: The increases are generated by force design and force structure changes throughout the Army, hence, the change will occur in all geographical areas worldwide where the Army is stationed.

QUESTION: How will the cap on U.S. forces in Europe be affected by the increased end-strength as it relates to Division 86?

ANSWER: The Army position is to recommend against continuation of the cap. The Army needs to retain the flexibility to program growth in Europe to ensure readiness and provide a strong ground combat force. However, assuming the FY 1983 DOD Appropriations Act cap on European strength levels will remain constant at the FY 1982 level, there are several factors that will affect how the transition to Division 86 unit designs will be accommodated within the cap. Ongoing OSD and JCS evaluation of European theater defense priorities and force mix within the cap, based on strategic assessment to meet the threat, will apportion program reductions and provide guidance to the Army concerning its force levels in Europe.

Division 86 is a significant step by the Army to increase the combat power of the heavy divisions and integrate new technology and equipment. The Army will press forward with transition to the new designs in Europe even though some modifications in initial plans may be necessary as a result of OSD and JCS assessment of force priorities. Few, if any, reductions in combat support and combat service support can be made without seriously degrading the ability to support a rapid increase of combat forces in theater. Consequently, as the transition to Division 86 designs are made, the Army may need to reduce the number of combat battalions in the forward deployed Divisions and either relocate them in CONUS or place them in the Reserve component. A key consideration in this concept is the availability of strategic mobility and our increased heavy reliance on the Reserve Component for early deploying combat units.

Modifications to the current Division 86 transition plan will be required to allow the Army to continue with the Division 86 transition in Europe with a continuing cap on strength levels.

QUESTION: Please provide details on the increased end strength for medical support, the specific requirements, and the planned deployment of these increased personnel.

ANSWER: Active Army military end strength for medical support for FY 1984 was increased by 746. These increases are for 219 Medical Corps officers, 313 Army Nurse Corps officers, 14 Physician Assistant Warrant Officers, and 200 enlisted personnel. This manpower will be used to increase the readiness posture for combat, combat support, and combat service support units; to reduce early in-theater mobilization shortfalls; to sustain the force during contingencies; and to improve readiness to meet evacuation policies in accordance with Defense guidance. The planned deployment of increased personnel is to staff forward deployed and deployable combat, combat support, and combat service support units and other supporting elements and facilities.

SUBSISTENCE

Question. How does the Army justify the transition to the MRE from the meal, combat, individual (MCI) recognizing that the MRE cost is more than 3 times that of the MCI?

Answer. The MRE is replacing the MCI to take advantage of advanced technology that increases acceptability, portability, and overall utility of the combat meal. The MRE has a shelf life of at least 4 years, and possibly 6 years as compared to the 3 year shelf life of the MCI. Initial production costs of the MRE were projected to be approximately twice that of the MCI. It is anticipated that follow-on procurement costs will decrease, as has been the case in the history of ration development/procurement. The procurement activity has projected that MCI/MRE acquisition costs will be comparable in approximately three years. In addition, the MCI has not been procurred in over two years, therefore the MCI cost does not reflect additive inflation that would have increased during the past two years.

PCS

Question. Why is training travel increasing if the enlisted end strength is decreasing?

Answer. Training travel is generated by students going into and out of military and civilian schools and has very little correlation with end strength. In FY 1982 due to the high rate of retention the actual training loads were less than those programed resulting in less actual PCS training moves than projected. In developing the training move program for FY 1983 and 1984 a repeat of the same high rate of retention is not expected. Therefore, the number of training moves for FY 1983 and 1984 are programed near the FY 1982 program level and not the lower actual level.

SELECTIVE REENLISTMENT BONUSES

Question: Why is the number of anniversary payments listed at 16,254 in FY 1983 when the FY 1982 initial payment is only 15,120?
Response: The projected number of anniversary payments is higher than the number of initial payments made in FY 82 to provide for accelerated payments of anniversary obligations. Accelerated payments, approved at Headquarters Department of Army, only for hardship or compassionate reasons, allow an individual to collect more than one anniversary payment in a single fiscal year.

Question: Were any funds recouped in FY 1982 or FY 1981 from anniversary payments? If not, did all enlistees receiving Selective Reenlistment Bonuses (SRB) fulfill the requirements established under provisions 37 U.S.C. 308? How much money does the Army expect to recoup in Selective Reenlistment Bonus anniversary funds in FY 1983 due to enlisted personnel failure to meet terms of reenlistment bonus agreement?
Response: The recoupment breakout by initial and anniversary payment funds is not available. The total Selective Reenlistment Bonus recoupment for FY 81 was $192,400. The FY 82 total was $264,700. No anniversary payments were made in FY 82 so the amount recouped from anniversary funds last year would be minimal. The total Selective Reenlistment Bonus recoupment for FY 83 is expected to total approximately $290,000. The Army is continuing its emphasis on bonus recoupment in order to increase the amount of unearned bonuses collected.

Question: The number of reenlistments is declining in FY 1984 by 3,600. Why is the number of Selective Reenlistment Bonus payments increasing by 57 percent?
Response: The 10,200 additional new bonus payments for FY 84 are required to sustain the NCO force in critical skills. In FY 84 the reenlistment eligible population with 10 or less years of service will be smaller than in FY 83, but proportionately higher in upper mental test category soldiers. The reenlistment propensity of these soldiers is less than that of lower test category soldiers as they are more marketable in the civilian sector. As an example, the reenlistment rate for mental test category I soldiers is 18% less than mental test category IV soldiers. Thus, with expected improvement of the economy, the retention of these high quality (upper mental test category) soldiers will require more monetary incentives in the form of reenlistment bonuses. This is especially true in the combat arms where recruiting quality improvements were most significant in FY 81 and FY 82.

Question: Please provide a list showing the job classifications in which enlisted personnel are currently eligible to receive requirement filled in each of these categories, and the number of Selective Reenlistment Bonus recipients by category. In which job classifications are enlisted personnel ineligible to receive Selective Reenlistment Bonuses? What are the current manning levels in these categories, and what percent of the requirements in each category are filled?
Response: All four job classifications contain both bonus skills and non-bonus skills. The chart below displays the current status of these job classifications with respect to the FY 83 Selective Reenlistment Bonus program:

Job Classification	Combat Arms	Electronic Warfare (EW) and Intelligence	Combat Support	Combat Service Support
Projected NCO Shortage by end FY 83	0	700	0	600
Number of SRB Skills	21	14	43	8
Number of Non-SRB Skills	21	5	144	83
Number of Bonus Recipients Thru Jan FY 83	3157	505	1229	387
Number of non-bonus Reenlistment thru Jan FY 83	4410	179	8484	7676

Skills are selected for the Selective Reenlistment Bonus program based on criticality, density of the skill, current and projected E5-E9 manning shortfall, and replacement cost. Bonuses are applied to skills only when cost effective and when required to complement other management initiatives such as reclassification, promotions, and prior service enlistments. Current NCO shortages include 469 in the combat arms and 1421 in EW/Intelligence skills. The Army's ability to reduce its NCO shortages - for example in Combat Arms from 6261 in FY 81 to zero by end of FY 83 - results directly from judicious application of Selective Reenlistment Bonus in support of other personnel policy initiatives. To maintain this status, we must allocate adequate Selective Reenlistment Bonus dollars for FY 84 and beyond.

Question: Of the enlisted personnel receiving Selective Reenlistment Bonuses, provide a breakout showing what percent receive payment at each level 1-6.
Response: The current breakout is shown below.

Percentage of Selective Reenlistment Bonus Payments by level	1	56%
	2	35%
	3	5%
	4	4%
	5	0
	6	0

END STRENGTH REDUCTIONS

QUESTION: Assuming reductions of 60%, 75% and 100% in the Air Force request for end strength increases, what would be the effect on training requirements in FY 1984?

ANSWER: With any of the proposed reductions the accession level would be reduced by 10,100. Early release actions would have to be taken to accomplish the added reductions. Consequently, training requirements would be reduced accordingly.

FUNDING LOWER PRIORITY PROGRAMS

QUESTION: Would these reductions allow for funding lower priority programs which were not included in the FY 1984 budget request?

ANSWER: Yes, provided no funding reductions are imposed. However, the Air Force's first priority still remains to fund end strengths to support authorized programs in the FY 1984 President's Budget. Some examples of programs that are of lower priority than programs associated with end strength increases that could not be included in the FY 1984 request due to fiscal constraints are described below.

Backlog of Maintenance and Repair (BMAR) - The BMAR at Air Training Command bases and the Air Force Academy is expected to increase an estimated $5.9 Million in FY 1984 based on current FY 1983 funding levels and funding levels reflected in the FY 1984 request. The result will be further deterioration of our physical plant.

Off duty and voluntary education programs - The FY 1984 request provides for less than one percent growth in enrollments. However, due to the absence of a GI Bill, our historical and projected growth is about five percent per year as new accessions concerned with expanding their education rely on the tuition assistance program to finance their off-duty study. This program is one of our most important recruiting and retention incentives.

Armed Services Vocational Aptitude Battery (ASVAB) research - Additional funding is necessary to expand exploration into new ability areas for ASVAB testing, new methods of calibrating/norming tests, increasing flexibility of Computerized Adaptive Testing (CAT) and expansion of tests used in the system.

Civilian Education and Training - Additional funding is essential to provide training in scientific/technical areas such as computer science, medical, acquisition, engineering and legal fields. Without additional funding many high priority training requirements must be deferred thus decreasing potential future gains in productivity and effectiveness.

IMPACT ON TRAINING REQUIREMENTS

QUESTION: What is the impact on training requirements of better retention rates during FY 1983 than anticipated in the FY 1984 budget?

ANSWER: Based on the President's Budget end strength, the most recent retention and loss experience the accession level would be reduced by 5,100 (70,100 to 65,000). Consequently, training requirements would be reduced proportionally.

IMPACT OF IMPROVED RETENTION & LOWER END STRENGTH

QUESTION: What is the impact of improved retention and lower end strength than budgeted on recruiting and advertising requirements?

ANSWER: The budgetary impact of the reduced end strength levels, as authorized by the conference committee, resulted in an estimated $3.3M decrease in the FY84 recruiting and advertising O&M funding requirements.

COST OF RECRUITER HELPER PROGRAM

QUESTION. What was the cost of the Recruiter Helper program in FY 1982? In FY 1983? How will the increased funds, as requested, be used?

ANSWER. FY 1982 O&M expenditures for the Recruiter Helper program were $748,000. We anticipate FY 1983 O&M expenditures will be $248,000. Our FY 1984 President's Budget requested funding of $1,087,000. This increase of $839,000 will significantly expand the current program, which is limited to officer procurement in difficult-to-recruit skills such as engineer officers and physicians in critical specialties. The increased funding will target Non-Prior Service (NPS) applicants and provide approximately two outstanding airmen per recruiter for a period of about two weeks each during FY 1984. These outstanding airmen assist field recruiters by providing direct support to include high school visitations and contact with outstanding prospects. The credibility of personal testimony from successful airmen will be essential to future recruiting success which is untested in an improved economy and must be obtained from a declining youth market.

DIFFERENCE IN FY 83/FY 84 REQUEST

QUESTION: What is the difference between the request for electronic typewriters included in the FY 1983 budget request, and this request in FY 1984?

ANSWER: There is no significant difference other than an upgraded model and additional units for medical teams and flights. This program could not be implemented in FY 83 due to fiscal constraints resulting from a $10.0 Million Congressional reduction to Recruiting and Advertising.

FUNDED BY AIR FORCE FOR ELECTRONIC TYPEWRITERS

QUESTION: Funds were appropriated by the Congress for this program in FY 1983, why was it not funded by the Air Force?

ANSWER: The appropriation bill for FY 1983 included a $10.0 Million reduction in Recruiting and Advertising. This reduction was far in excess of amounts saved as a result of force structure changes and improved retention as addressed in our appeals. Consequently the resulting fiscal constraints necessitated that we defer procurement action on the electronic typewriters.

RECRUIT AND SPECIALIZED TRAINING

QUESTION: What are the additional requirements for CRYPTO/SIGINT training and General Intelligence skill training in FY 1984?

ANSWER: There are no additional requirements for CRYPTO/SIGINT training and General Intelligence skill training in FY 1984. Construction funding for new CRYPTO/SIGINT training facilities at Goodfellow Air Force Base, TX and General Intelligence skill training at Lowry Air Force Base, CO was approved in the FY 1983 Military Construction Program. Increased Operations and Maintenance funding for CRYPTO/SIGINT and General Intelligence skill training are the associated start-up costs for fitting out, furniture, minor equipment and ongoing operation after the facilities are completed in FY 1984.

QUESTION: Were the FY 1983 requirements fully funded by the Air Force?

ANSWER: FY 1983 requirements were fully funded by the Air Force. The decision was made by the Air Force during the FY 1983 Program Objectives Memorandum process to fund for facility construction in FY 1983 and Operations and Maintenance start-up costs in FY 1984 after facility completion. No new or additional capabilities not previously planned and justified are included.

FLIGHT TRAINING

QUESTION: What is the impact on flight training requirements associated with reductions in the request for increased end strengths?

ANSWER: The Air Force is currently making determinations as to which programs will be adjusted to comply with the end strength limitation. Until these decisions are finalized, it is not possible to quantify the impact on flight training requirements.

COMMAND READINESS EXERCISE SYSTEM (CRES)

QUESTION: What is the baseline for CRES funding in FY 1983?

ANSWER: CRES funding for FY 1983 ($.7M) is for (1) Program Management Office (PMO) travel and supplies ($.1M) and (2) a contract with Aerospace Corporation, Los Angeles, CA ($.6M). Aerospace is developing large technical portions of the CRES functional description which will be used by the Air Force Computer Acquisition Center (AFCAC) to develop the Request for Proposal (RFP).

QUESTION: What is causing increased requirements in FY 1984?

ANSWER: The $4.2M increase is in two areas: (1) travel/supplies increases ($.1M) because CRES auhtorized manning goes from 24 to 48 personnel and TDY requirements increase to support finalization of the RFP and source selection at Hanscom AFB, MA; (2) the largest increase ($4.1M) is in ADP contractual services. Based on the current schedule, a contract will be awarded and obligated in Sep 84. The primary effort will be to develop five new generic "wargame" exercises to support Phase I at Air University. These exercises will be for theater, sub-theater, deployment planning, tactical, and strategic nuclear exchange applications. Other efforts under the contract are to develop a system architecture for integrating the new software with "off-the-shelf" hardware and operating software, providing maintenance documentation and user training, and developing a concept for the Phase I system to grow economically to Phases II and III.

QUESTION: When is the project moving to the development phase?

ANSWER: The CRES PMO will hold a System Requirements Review (SRR) in Nov 83. That review, which will validate requirements for inclusion in the RFP, marks the end of the conceptual/definition stage and the beginning of the development stage.

QUESTION: How many personnel will use CRES in FY 1984?

ANSWER: CRES will not be operational in FY 1984. As mentioned above, the contract is scheduled to be awarded in Sep 84. In addition to the software development effort mentioned above, the contract will call for delivery of new automated data processing equipment (ADPE) during FY 1985. Initial operating capability (IOC) is scheduled for Sep 85 with an in-house developed wargame operating on the new ADPE. Therefore, FY 1985 is the first year in which Air Force personnel will use the CRES. The first contractor developed software will be delivered in FY 1986 with full operational capability scheduled for Jan 87.

HEALTH PROFESSIONALS SCHOLARSHIP PROGRAM (HPSP)

QUESTION: Page 514 of the O&M, AF justification book lists the load for HPSP is at 1550. Please explain the reduced HPSP authorization as described on page 513.

ANSWER: Projected physician staffing and better retention rates indicate that fewer Health Professions Scholarship Program (HPSP) medical school graduates will be needed. Therefore, a downward adjustment (43 students) was made in the HPSP allocation to the Air Force, which is reflected in load computation.

TRAINING SUPPORT ACTIVITIES

QUESTION: What is causing the increased Audiovisual requirements in FY 1984? Please explain the increase in civilian workyears?

ANSWER:

a. The increase of $1.6 Million in audiovisual (Program Element 85790) requirements includes $.4 Million for price growth, $.1 Million for replacement equipment and maintenance requirements and $1.1 Million for civilian personnel.

b. The FY 1983 request erroneously excluded end strength and funding for an announced A-76 contract study on on-going audiovisual activities. The FY 1984 estimate properly restores both end strength (42) and funding ($1.3 Million) for the workload (42 workyears) associated with the audiovisual activities then being studied. An additional $.7 Million is needed due to increased workyear costs. The FY 1983 estimate is priced at a lower workyear cost than that actually being experienced. Due to realignment of Training Development (Program Element 84772) in FY 1982 and Audiovisual Support (Program Element 85790) in FY 1981, accurate workyear costs were not available at the time the FY 1983 estimate was developed. Actual experienced workyear costs used to develop the FY 1984 estimate increased $400 per workyear over the FY 1983 factors resulting in an additional requirement of $.7 Million. The increase of 81 workyears reflected in the FY 1984 request is an error resulting from confusion over the treatment of civilian end strength related to A-76 contract conversion studies. The actual increase in workyears is 41.

BASE OPERATIONS TRAINING

QUESTION: Please explain the increased request for furniture when there is no change in the number of quarters.

ANSWER: Although the number of bachelor housing quarters remains constant, net additional funding of $1.0 Million ($1.6 Million in FY 1983 for 1,470 personnel and $2.6 Million in FY 1984 for 2,204 personnel) is needed to equip and furnish dormitories at seven Air Training Command bases. These new dormitories will house over 2,200 personnel in two-person rooms of 180 square feet. The dormitories being replaced are pre-WWII buildings that house three persons per room in 220 square feet. These structures are being torn down as new dormitories are completed. Present furniture is not compatible with the new two-person room design and is beyond economical repair. Additionally, many of our present dormitory rooms are not fully furnished or do not contain furniture that meets Air Force guidelines for enlisted dormitories.

HOSPITAL OPERATIONS

QUESTION: There is no increase in the Aeromedical evacuation performance criteria; why the increase in funding? Is this increase the result of a deferral in FY 1983? If so, why should the Congress appropriate additional funds for this program in FY 1984 when the FY 1983 funds were not used for this program?

ANSWER: The additional funds ($2.837 million) were programmed for FY 1984 to perform periodic Depot Maintenance (PDM) for three aircraft (none were required in FY 1983) ($1.737 million) and the repair of a hangar roof ($1.100 million) in which C-9 aircraft are maintained. PDMs are accomplished on a cyclic basis and, depending upon the age of the aircraft, are scheduled according to the industrial standards established for commercial C-9 fleets. (C-9s require PDM every 14,000 air miles or once every 4.5 years. This means that each C-9 PDM depends on its utilization rate. Hence, it is normal that the number of C-9s requiring PDM each year will vary between years.)

BASIS FOR INCREASED BENEFICIARY STRENGTH

QUESTION: What is the basis for increased beneficiary strength leading to increased need for medical supplies? Why was the bench stock depleted in FY 1983?

ANSWER: Increased medical supply requirements are associated with projected beneficiary increases through population growth and recovery of CHAMPUS workload in the direct care system. The FY 1983 bench stock was depleted to support increased workload previously done in the CHAMPUS system. For example, Certificates of Nonavailability (CNA) were reduced by 25.6% for the first eight months of FY 83 compared to the first eight months of FY 82. No additional funds were available to purchase the medical supplies associated with this workload.

TELECOMMUNICATIONS, COMMAND AND CONTROL-MEDICAL

QUESTION: Please explain the new requirements for upgrading Medical Treatment Facilities Communications Systems and dedicated leased lines and radios as described in the O&M, AF justification book p. 565.

ANSWER: Dedicated leased lines and radios are required to create a communications capability at locations where second and third echelon wartime hospitals will be located. Command and control at main operating bases, and coordination of activities at these second and third echelon sites, will be provided through a combination of intra-base radio links and dedicated telephone circuits. Upgrading Medical Treatment Facilities Communications is required to provide small medical facilities (40 beds or less) with direct access to physician consultants in regional hospitals and medical centers.

BOS-MEDICAL

QUESTION: Is the requirement for increases in Real Property Maintenance in the FY 1984 budget, a request for funds deferred by the Air Force in FY 1983? Was this program a priority Air Force effort in FY 1983?

ANSWER: The deferral of FY 83 funds budgeted for real property maintenance was necessitated by requirements to purchase additional medical supplies in a priority effort to treat as many beneficiaries as possible in the direct care system. Also, the increased costs in the area of care in non-defense facilities further eroded our real property maintenance base. For example, we are experiencing tremendous growth in costs (+7.7M or 97%) charged by Uniformed Services Treatment Facilities (formerly Public Health Services facilities).

JOB CLASSIFICATION

QUESTION: Please provide a list showing the job classifications in which one is currently eligible to receive an SRB, the percentage of requirements filled in each category, and the number of SRB recipients by classification. Also provide a list of classifications which are ineligible for SRBs, the current manning level, and the percentage of requirement filled.

ANSWER: Listed below are the Air Force specialties (as of 1 April 1983) that receive the SRB in at least one of the three reenlistment zones. For your information, Zone A reenlistments occur between 3 and 6 years service; Zone B between 6 to 10 years; and Zone C between 10 to 14 years. We show current (6 February 1983) E4, E5, and E6 manning which is roughly equivalent to the three zones. This manning is a "snapshot" and does not consider future projections which DOD guidelines established as a basic element in determining SRB requirements. Those skills that had bonus zone reductions/terminations on 1 April 1983 are identified by an asterisk (*). Corresponding decreases in manning levels can be anticipated. Those bonus zones that are currently authorized an SRB are identified by a pound sign (#). There are some skill zones that are receiving the bonus that are manned over 100 percent; there are three reasons for this: (1) on a selective basis there is a need to keep more people in one zone to provide a pool for future less well-manned zones particularly where requirements are increasing, (2) we follow the Office of the Secretary of Defense's suggestion that bonus levels not be reduced more than two increments in a fiscal year, and (3) manning levels have not yet adjusted to 1 Apr 83 SRB reductions/terminations. The current manning levels indicated must be caveated by the comment that taken alone they are a transient, superficial measure of effective SRB management. Criteria to determine which specialties qualify a reenlistee for payment of an SRB is much more complex. As set forth in DOD guidance, a balanced evaluation must include, as a minimum: a) serious undermanning in a substantial number of adjacent career years (3 or more) which can be affected by the bonus; b) chronic and persistent shortages in total career manning; c) high first term replacement cost, including training; d) relative "unattractiveness" of skill, as compared to other skills; and e) essentiality of skill to defense mission. Our evaluation also includes projected losses to a skill, projected as well as current authorizations, and the number of reenlistees required in specific year groupings to sustain the career content of a military specialty. Listed separately below are specialties that have at least one bonus zone with less than 100 authorizations and are therefore subject to wide swings in manning with the gain or loss of small numbers of people.

AFSC	Nomenclature	E4 (Zone A)	E5 (Zone B)	E6 (Zone C)	SRB Recipients
*111X0	Aerial Gunner	# 84.9	180.6	95.3	262
*112X0	Refueling	# 107.2	210.1	78.2	466
*113X0	Flt Engineer	# 74.9	146.7	71.2	912
*114X0	Loadmaster	# 81.8	149.2	80.7	909
*115X0	Pararescue	# 129.4	95.5	50.7	148
116X0	Abn Comm Sys	# 45.0	91.4	95.3	65
*121X0	Survival Tng	213.2	# 58.9	68.6	72
*201X0	Intel Ops	# 97.4	117.9	87.2	573
201X1	Target Intel	# 72.3	# 59.2	65.9	80
*202X0	Radio Comm Anal	# 149.3	# 78.3	75.7	524
205X0	Elect Intel Ops	# 99.5	# 56.9	# 45.5	134
*206X0	Imagery Interp	# 88.5	79.1	86.7	136
207X1	Morse Sys	# 104.1	87.9	100.6	292
207X2	Printer Sys	104.1	# 81.5	72.2	157
*208XX	Crypto Linguists	# 187.1	# 84.5	# 64.5	1040
242X0	Disaster Prep	# 54.9	92.7	117.5	42
*251X0	Weather	105.6	112.4	# 75.6	1017
*272X0	Air Traffic Con	# 99.8	# 132.6	# 72.3	2492
275X0	TAC Air Comd & Con	# 54.2	# 64.6	150.9	96
295X0	Auto Digital Swg	# 53.4	101.1	115.5	107
296X0	Comm Programs	0.0	# 85.0	87.7	52

*303X1	ATC Radar	124.2	91.2	# 102.5	439
303X3	Auto Track Radar	145.6	# 82.4	# 83.6	166
*304X0	Wideband Comm	# 105.7	# 77.6	93.5	748
*304X1	Nav Aids	# 94.0	112.6	83.8	480
304X4	Gnd Radio Comm	# 83.8	# 82.6	# 89.7	1098
304X6	Space Comm Sys	# 73.5	# 66.0	67.9	143
305X4	Elect Comp & Swg	# 86.9	90.2	# 87.8	854
*306X0	Elect Comp Crypto	# 108.6	92.3	# 82.9	690
*306X1	Elect-Mech Comm	# 74.8	86.7	84.3	108
306X2	Telecomm Sys Maint	# 84.1	86.5	140.1	121
307X0	Telecomm Sys Con	# 97.9	# 84.3	86.3	303
316X0	Msl Sys Anal	# 98.2	# 100.0	86.4	541
*316X3	Instrumentation	# 88.8	103.0	99.2	155
321X0	Bomb-Nav Sys	# 69.3	# 79.0	# 66.2	211
*321X1	Defensive Fire Con	# 90.0	180.4	102.1	145
*321X2	Weapons Con	# 86.8	103.0	103.4	345
*322X2	Avionics Sensor	# 87.9	# 88.6	# 78.3	284
*324X0	Precision Meas	# 60.7	107.7	104.5	386
*325X0	Auto Flt Con	106.7	101.1	# 68.6	261
325X1	Avionics Instm	# 95.9	# 82.1	# 88.3	433
326X3	Avionics Elect Warfare	# 140.4	# 90.9	# 68.6	153
326X4	Avionics Comp Test Stn	# 109.7	# 92.3	# 78.3	454
*326X6	Avionics Attack Con Sys	# 90.9	# 70.9	# 71.0	326
*326X7	Avionics Instm & Flt Con	# 82.2	# 83.7	# 64.0	307
*326X8	Comm, Nav, & Pen-Aids	# 89.2	# 71.4	# 62.7	280
*328X0	Avionics Comm	# 97.2	# 74.7	# 70.7	555
328X1	Avionics Nav Sys	# 91.2	# 90.5	# 81.5	608
328X3	Elect War Sys	# 76.5	# 65.8	# 69.2	769
328X4	Inert Radar Nav	# 61.8	# 83.6	# 89.1	345
392X0	Maint Sched	# 42.7	95.7	122.7	174
*423X0	Acft Elec Sys	97.9	# 86.4	# 79.5	828
423X1	Acft Environ Sys	# 85.6	# 86.1	# 73.0	644
*423X2	Aircrew Egress	# 84.8	# 97.7	78.9	367
423X3	Acft Fuel Sys	# 70.2	# 72.3	79.5	451
*423X4	Acft Pneud	# 78.6	# 85.3	# 84.5	873
462X2	Jet Engine	# 92.4	# 90.8	94.9	2434
426X3	Turboprop	# 92.1	# 87.9	91.1	314
*427X1	Corrosion Con	88.0	# 79.0	95.9	395
*427X5	Airframe Repair	# 79.8	# 83.3	101.8	814
*431X0	Helicopter Mech	# 91.9	99.1	98.1	326
*431X1	Tac Acft Maint	# 94.5	# 89.7	# 81.7	5769
*431X2	Alft/Bomb Acft Maint	# 82.6	# 90.6	# 83.1	4365
*445X0	Msl Facilities	# 83.4	# 93.3	# 80.3	441
*462X0	Acft Armament	97.8	# 87.6	87.2	2277
*463X0	Nuclear Weapons	# 77.9	109.1	# 79.0	494
*464X0	Explos Ord Disp	# 86.1	# 107.9	# 84.8	312
*511X0	Computer Opr	# 97.3	107.6	90.3	1837
*511X1	Comp Programmer	# 96.1	# 96.9	# 73.2	853
*542X1	Elec Power	126.1	# 84.8	91.3	155
542X2	Elec Power Pdn	# 77.5	90.2	110.2	214

545X0	Refrig & Cryogen	# 87.5	96.5	113.5	183
*545X1	Liquid Fuel Sys	# 91.9	81.8	107.1	79
552X2	Metal Fabricat	# 81.7	78.9	165.4	78
*553X0	Engineer Asst	# 98.8	# 77.9	# 77.6	417
*554X0	CE Resource Mgt	# 77.6	105.1	96.7	169
*811X0	Security	# 111.5	70.2	119.8	2259

SPECIALTIES WITH LESS THAN 100 AUTHORIZATIONS
IN AT LEAST ONE BONUS ZONE

*203X0	Interrogator	20.0	130.0	# 75.0	5
*209X0	Defensive C^3CM	# 89.7	# 94.7	# 48.5	37
*222X0	Geodetic	# 117.4	# 122.2	# 44.1	66
*241X0	Safety	# 308.0	# 91.0	88.6	250
*273X0	Combat Con	# 82.2	# 106.4	# 59.2	104
277X0	Space Sys Ops	# 83.3	82.4	87.5	0
*297X0	Radio Frequency	0.0	# 172.7	66.7	17
*309X0	Space Sys Equip	# 116.0	112.1	113.4	162
316X2	Msl Elect Equip	# 115.8	# 102.5	# 72.5	116
326X5	Avion Man test Stn	# 100.0	# 97.6	# 100.0	120
*328X2	Abn Warn & Con Rad	# 148.1	# 59.6	# 55.7	87
*328X5	Abn Comd Post	# 73.7	# 80.9	112.5	119
*443X1	Msl Pneud	81.3	# 86.4	70.0	14
445X1	Msl Liq Propel	# 119.4	# 76.1	# 83.3	56
924X1	Histopathology	94.9	88.9	# 68.8	11
*99104	Sys Repair	# 177.4	# 98.3	# 92.1	95
*99105	Scien Meas	# 81.0	# 135.6	113.5	147
*99106	Scien Lab	# 71.7	# 104.2	100.0	130

Listed below are the remaining Air Force specialties that are not currently authorized a Selective Reenlistment Bonus. Those skills identified with an "L" have at least one bonus zone with less than 100 authorizations. Once again, this is current manning and does not address future projections.

AFSC	Nomenclature	E4 (Zone A)	E5 (Zone B)	E6 (Zone C)
100X0	First Sergeant	-	-	-
122X0	Aircrew Life Support	108.9	98.1	92.3
L231X0	Audiovisual Media	69.1	110.1	112.2
231X1	Graphics	90.1	93.9	110.1
L231X2	Still Photographic	76.9	102.0	146.7
L232X0	Audiovisual Production	70.5	109.7	116.2
L233X0	Photoprocessing	107.5	114.0	129.8
L233X1	Photoprocessing Control	61.5	70.5	107.0
271X1	Airfield Mgt	94.4	119.1	119.9
271X2	Operations Sys Mgt	86.0	98.3	107.4
274X0	Command & Control	111.2	108.1	87.2
276X0	Control & Warning	79.2	97.6	109.5
L276X2	Intercept Dir	0	47.6	64.0
291X0	Telecomm Ops	102.8	87.8	94.8
293X3	Gnd Radio Opr	96.3	90.4	107.8
302X0	Weather Equip	110.9	95.1	99.0
L302X1	Abn Meterological Atmospherical Research	30.0	162.5	80.0
303X2	AC&W Radar	88.8	74.4	85.1

304X4	GND Radio Comm	83.3	82.6	89.7
304X5	TV Equip	107.1	106.2	89.3
L316X1	Msl Sys Maint	183.3	118.0	96.7
L326X0	Avionics Aerosp Gnd Equip	98.4	92.1	112.5
L341X1	Instm Tng	-	66.7	25.0
L341X2	Def Sys Tng	53.8	76.5	80.8
L341X3	Analog Flt Simulator	64.4	76.6	114.0
341X4	Digital Flt Simulator	147.8	79.5	91.2
L341X5	Analog Nav/Tac Tng	87.9	90.5	86.4
341X6	Digital Nav/Tac Tng	122.6	67.6	65.5
L341X7	Msl Tng	50.0	62.0	85.0
L361X0	Cable & Antenna Sys Maint	99.0	91.2	116.5
361X1	Cable Splicing Instl Maint	114.5	100.0	106.6
362X1	Tel Cnt Off Swit Equip	117.9	100.0	108.5
L362X3	Msl Con Comm Sys	178.8	89.5	95.0
362X4	Tel Equip Instl & Rpr	110.2	100.7	105.3
391X0	Maint Sys Analysis	63.7	86.5	77.0
L404X0	Prec imagery Maint	82.5	100.0	150.0
L404X1	Aerosp Photographic Sys	77.3	114.6	84.5
423X5	Aerosp Gnd Equip Mech	93.5	101.3	95.6
L426X1	Recip Propulsion Mech	70.0	76.9	71.4
427X0	Machinist	98.5	92.9	97.3
427X2	Nondestructive Inspect	92.3	101.8	84.5
427X3	Fabrication & Parachute	81.2	102.3	104.6
427X4	Metals Processing	100.0	116.8	79.2
443X0	Msl Maint	130.4	99.7	109.1
461X0	Munitions Systems	97.8	96.4	94.3
427X0	Base Vehicle Equip Mech	75.9	113.5	-
472X1	Special Vehicle Mech	-	-	98.4
472X2	Gen Purp Vehicle Mech	104.4	119.3	-
472X3	Vehicle Body Mech	85.6	92.2	-
472X4	Vehicle Maint Cont	67.2	105.4	92.1
472X5	Gen Purp Vehicle/Body	-	-	105.5
542X0	Electrician	91.7	83.7	108.7
542X2	Heating	77.5	90.2	110.2
543X3	CE Control Sys	60.0	139.3	140.7
551X0	Pavements Maint	116.6	110.8	116.2
551X1	Construction Equip Opr	97.3	102.8	119.5
552X0	Carpentry	101.7	91.5	-
552X1	Masonry	100.0	90.2	-
55273	Structural Tech	-	-	121.7
L552X4	Protective Coating	118.4	117.0	265.0
552X5	Plumbing	88.6	97.3	119.0
553X0	Production Control	98.8	77.9	77.6
L566X0	Pest Management	85.3	92.0	75.9
L566X1	Environment Spt	78.8	86.0	106.2
571X0	Fire Protection	86.8	102.9	123.4
L591X0	Seaman	116.7	105.0	90.9
L591X1	Marine Engine	37.5	106.7	66.7
602X0	Passenger & Household Goods	103.6	91.7	-
602X1	Freight Traffic	141.5	114.6	-
602X2	Packaging	87.1	122.5	113.6
602X3	Traffic Mgt	-	-	117.4
603X0	Vehicle Opr	82.0	119.0	144.2
605X0	Air Passenger	57.6	107.0	-
605X1	Air Cargo	93.6	97.2	-
605X2	Air Transportation	-	-	114.1
611X0	Services	90.2	103.6	130.4
L612X0	Meatcutter	80.6	97.0	115.4

L612X1	Subsistence Ops	100.0	123.2	120.6
62250	Food Service	68.6	113.2	150.0
L622X1	Diet Therapy	82.9	106.3	112.3
631X0	Fuels	97.6	109.3	100.2
645X0	Inventory Mgt	108.9	99.2	97.0
645X1	Materiel Facilities	88.7	88.9	116.6
645X2	Supply Sys	53.1	149.1	96.5
651X0	Contracting	108.5	100.5	62.0
661X0	Logistics Plans	56.1	107.1	75.2
672X1	Financial Mgt	108.8	99.4	-
672X2	Financial Svc	125.9	103.2	-
672X3	Financial Mgt	-	-	86.3
673X0	Auditing	-	-	-
L691X0	Cost & Mgt Anal	88.9	137.3	75.6
701X0	Chapel Mgt	90.5	109.7	82.7
702X0	Administration	94.6	95.1	106.2
703X0	Reproduction	100.0	97.0	108.5
L705X0	Legal Svc	177.3	87.5	104.1
732X0	Personnel	100.9	106.7	78.0
732X1	Personnel Affairs	72.7	110.2	87.4
L732X4	Career Advisor	45.3	154.8	105.9
733X1	Manpower	143.2	124.5	95.5
734X0	Social Actions	81.7	104.7	73.8
741X1	Recreation Svc	131.9	118.9	119.0
L742X0	Open Mess Mgt	90.8	120.5	88.7
L751X0	Education	70.0	105.3	89.2
751X2	Training	65.7	118.5	94.6
L751X3	Instr Sys	92.0	83.1	94.9
753X0	Small Arms	90.7	108.1	99.0
L753X1	Gunsmith	12.5	300.0	200.0
791X0	Public Affairs	100.8	116.8	103.3
L791X1	Radio & TV Broadcasting	77.5	113.5	102.8
L791X2	Historian	222.2	77.8	73.9
811X2	Law Enforcement	91.4	110.7	114.7
821X0	Special Investigations	-	107.3	90.4
871X0	Band	105.4	131.5	108.7
L872X0	Instrumentalist	-	97.5	90.7
902X0	Medical Services	91.0	109.2	90.0
L902X1	Cardiopulmonary Lab	34.9	172.2	118.6
902X2	Surgical Services	82.5	136.3	74.8
903X0	Radiologic	118.2	114.0	92.9
903X1	Nuclear Medicine	15.8	123.1	133.3
905X0	Pharmacy	90.7	98.9	96.1
906X0	Medical Admin	79.5	103.5	108.2
907X0	Environmental Health	108.3	113.2	91.7
908X0	Veterinary	91.0	111.0	106.5
911X0	Physiology	97.0	116.1	95.7
L912X5	Optometry	123.8	98.3	68.9
L913X0	Physical Therapy	56.3	152.4	75.9
L913X1	Occupational Therapy	89.5	166.7	57.1
L914X0	Mental Health Clinic	75.3	147.5	60.3
L914X1	Mental Health Unit	93.8	118.0	90.5
915X0	Medical Materiel	89.0	119.8	90.0
917X0	Physician Asst	-	200.0	50.0
918X0	Biomed Equip Maint	90.8	159.0	68.3
L919X0	Orthotic Spec	100.0	115.4	71.4
924X0	Med lab	93.7	108.6	102.7
925X0	Cytotechnology Spec	66.7	83.3	69.2
981X0	Dental Asst	113.5	87.8	100.0
982X0	Dental Lab	112.0	120.9	105.6

PERMANENT CHANGE OF STATION (PCS)

QUESTION: The FY 1982 estimate included in the FY 1983 budget submission for PCS is nearly $44 million above the FY 1982 actual reflected in the FY 1984 budget submission. Please explain this large reduction.

ANSWER: During the execution of the program, savings of approximately $44 million were identified: 1) household goods shipment costs were lower than budgeted ($17.0M), 2) actual operational and training moves were lower than programmed ($12.3), 3) savings associated with TLE ($5.2)*, 4) the per diem equity change by Congress which prohibited double payments to enlisted personnel, therefore enlisted on PCS began receiving $45.50 instead of $50 per diem ($4.0) and 5) fewer moves in officer and enlisted separations ($5.4M). FY 82 surplus PCS funds were used as a source for reprogramming to other Air Force and DoD accounts and for offsetting the pay raise. The FY 83 program was reduced via Congressional mark, and the FY 84 program was reduced by the Air Force.

* FY 82 program included $19.1 for TLE. Air Force supplemental request was for $13.9 to fund this entitlement. The Air Force had $5.2 available. When TLE was not approved, it caused $5.2 surplus.

QUESTION: Will there be additional operating costs for this deployment?

ANSWER: The operating funds budgeted for the nondeployed fleet will finance the training operations of ships deployed to Central America. Accordingly, there is no incremental additional cost over budget for the current level of naval support involved in sending a carrier task force to Central America.

QUESTION: Are these costs in the FY 84 budget already?

ANSWER: The FY 1984 budget for the nondeployed fleet includes funding for a variety of training exercises. These exercises are normally conducted in diverse areas, including the Northern Pacific, Caribbean or any area designated as nondeployed fleet command areas. If extensive commitments should develop in the nondeployed fleet command areas, some training evolutions would have to be postponed or cancelled.

QUESTIONS SUBMITTED BY SENATOR KASTEN

G.I. BILL

QUESTION: I recently cosponsored an Armstrong Amendment to the DoD Authorization Bill that would have restored the G.I. Bill. Opponents argued that such a bill would exacerbate retention problems by providing an incentive for a serviceman to leave the military in order to take advantage of his education benefits. My own belief is that this amendment was written in such a way as to minimize the problem. What is your position on a new G.I. Bill? I realize that at the present the Services are having no trouble recruiting high quality individuals. But what about the long run? Under what circumstances would you recommend the implementation of a new G.I. Bill?

ANSWER: Our position is that a new G.I. Bill is not required at this time because our current recruiting and retention results are excellent. The recruiting and retention incentives we have in place now are working well.

Our current educational benefit program, the Veterans' Educational Assistance Program, does not offer enlisted members benefits as lucrative as those provided by the G.I. Bill of the Vietnam-era, but does offer a valuable opportunity for those who wish to attend college. The supplementary benefits targeted to selected skills in the Army have improved force manning at an attractive price to the taxpayer.

There is no question that in the long run, as the economy improves and the youth population declines, recruiting and retention will become more difficult. I would recommend that mix of additional recruiting and retention resources which, I believe, will most efficient alleviate the force manning problems as they arise.

These additional resources might very well include a new G.I. Bill. However, proponents of the use of educational benefits to improve recruiting should recognize that there is at least the potential for these benefits to have an adverse effect on retention. In fact, we have some evidence that the Vietnam-era G.I. Bill may have reduced the first term reenlistment rate in the Navy by as much as 20%. Perhaps some of the features present in the new G.I. Bills that have been proposed, such as the opportunity to transfer the benefits to dependents, may offset these adverse retention incentives. However, these additional features are costly and may not, in fact, offset the powerful incentive to separate in order to attend college. Moreover, the efficiency of using a new G.I. Bill to improve recruiting should be compared to other incentives, such as enlistment bonuses, that do not have negative effects on retention.

We will have more evidence on the retention effects of education benefits as we examine the reenlistment behavior of enlisted members who were eligible for VEAP kickers. It may be that the best way to adjust to future manning problems is the institution of a new G.I. Bill. But, we don't know now what the nature of future manning problems will be nor do we know as much about the effects of educational benefits as we would like. We often are forced to make decisions or recommendations with less information than we would like but, fortunately, our current force manning conditions make the price of deferring a decision in this case very attractive, while the benefits of deferring a decision are potentially large.

NAVY PETTY OFFICER SHORTAGE

QUESTION: The Navy has embarked on a program to build and maintain 600 ships. While I believe this is a necessary enterprise, I wonder about the ability of the Navy to man all these vessels. I understand that the Navy itself has raised this issue. The real concern, as I understand it, is the projected shortage of petty officers and some specialists. Do you think this is a legitimate concern? If so, what can be done about it?

ANSWER: As the economy improves, we face a real challenge to continue with the retention levels we have experienced recently. However, we and the Navy are convinced that with the proper level of pay incentives, bonuses, and educational incentives; attention to quality of life issues; and adequate resources for recruiting, we can attract and retain enough qualified men and women to meet the Navy's personnel needs. With your support, the petty officer shortfall will be corrected by FY86, and the 600 ship Navy can be manned as programmed by 1990.

INCREASED MANPOWER REQUIREMENTS

QUESTION: There are a number of new systems coming into the inventory that will require additional military personnel. The Ground Launched Cruise Missile (GLCM) deployment is a good example. What are your plans to accommodate these increased requirements if the force structure is constrained to the fiscal year 1983 level?

ANSWER: Our manpower program has been structured to support the programs and weapons systems requested in the budget. If the manpower force structure is constrained to the fiscal year 1983 level, causing an approximately 37,000 shortfall in active military manpower, we will, of course, have to reassess the allocation of the authorized end strength to specific programs. The Services and OSD will have to review the priority of systems and programs and then allocate available manpower authorizations accordingly. Reductions will affect our long-term goal to increase readiness and may affect the effective fielding of some systems.

USE OF RESERVE FORCES

QUESTION: There is a great deal of interest in furthering the use of the Reserve forces to accommodate the increased workload. Do you believe there are economies that can be achieved by using Reserve and Guard units for missions that were previously performed by the active forces?

ANSWER: Yes, there are prospective economies in the selective use of Reserve and Guard units for missions previously performed by the active forces -- as well as for new force growth. Not all functions can or should be performed by Reserve or Guard units. The selection and implementation of the optimum mix of Active Component and Reserve Component units is an important and challenging issue which is receiving increasing attention.

CURRENT MANNING OF RESERVE FORCES

QUESTION: Do you believe that the current manning of the Reserve forces allows their accepting additional missions?

ANSWER: Adding missions to the total force is something that must be done on a case-by-case basis. Whether a new mission capability is added to the active force or the Reserve forces depends on many things. It is unlikely, however, that either the active or Reserve forces could accept any new mission without at least some additional manpower.

QUESTION: Approximately 41% of the total force of military personnel are members of Guard or Reserve units. This is up considerably from the 1980 level of 29%. Just how high a percentage mix of the total force do you believe it is prudent to assign to members of the Reserve forces?

ANSWER: Missions are not allocated to the Reserve forces on a "percentage mix" basis. Rather, numerous factors, including readiness, must be weighed on a case-by-case basis before a decision can be made on which component of the total force should be given a particular mission capability. Thus, the "percentage mix" is merely a result of the decision process and not something that can or should be explicitly addressed in making total force decisions. Moreover, the quoted number is an average across all Reserve Components and across all mission areas, whereas the "mix" actually varies widely with mission and component.

Very little of the 1980-1983 increase in the "percentage mix" actually resulted from adding missions to the Reserve Components. Rather, it is a reflection of this Administration's efforts to correct the serious Reserve manning shortfalls inherited from the previous administration.

QUESTION: The policy of DoD in the past has been to consider active military manpower as the last resort when filling support manpower requirements. Does this continue to be true?

ANSWER: Yes, it does. Our policy is to provide for the support as inexpensively as possible, within the constraints of the requirement. Since active military manpower is the most expensive means of providing support, it is the last resort and is used only when there is an overriding reason for the unit to be active, such as to maintain the unit in a ready status overseas.

MANNING REQUIREMENTS

QUESTION: The 600-ship Navy is just over the horizon. Is it your view that sufficient personnel assets are going to be available in the All Volunteer environment to accommodate the manning requirements?

ANSWER: The President's Military Manpower Task Force examined this question and concluded that, despite a rising requirement for petty officers and the current shortage, full requirements can be met. A key to meeting future personnel requirements is that the compensation package we offer to military personnel, both first term and career members, remains competitive. It is likely that our recruiting and retention goals will become more difficult to meet as the economy improves and the population of recruit-age people declines. However, if we choose that mix of recruiting and retention resources that is best suited for the task, we believe that we can meet this challenge, and maintain an All Volunteer Force at a reasonable cost to the taxpayer.

SUBCOMMITTEE RECESS

Senator **Stevens**. The Defense subcommittee will stand in recess until Saturday, July 23 at 9 a.m., when we will meet for a field hearing in Biloxi, Miss., to receive testimony on Department of Defense participation in drug interdiction programs.

[Whereupon, at 12:14 p.m., Thursday, July 21, the subcommittee was recessed to reconvene at 9 a.m., Saturday, July 23, 1983.]

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